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THE ECONOMIC RECORD

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THE DEGREE OF MONOPOLY POWER

I. Kaldor's Suggested Measure of the Degree of Monopoly Power.
II. Entry Supply Price.
III. The "Full Cost" of Existing Firms.
IV. The Degree of Monopoly and the Theory of Price.
V. The Percentage Gross Margin.

I

In a recent article[1] Dr. Kaldor has suggested an alterative measure of the degree of monopoly power. This measure is based upon the notion that "in a purely competitive industry, where entry is completely free, the maximum price which 'insiders' can charge without attracting 'outsiders', and the minimum price which they require in order to continue to supply the same market, are approximately equal to each other". Hence, it is suggested, the divergence from equality of these two prices provides a measure of the degree of monopoly power enjoyed by an industry. Thus, "if we denote the price which just fails to cover the costs of production (including, of course, a normal rate of profit under 'cost') of potential new entrants by P and the costs of production (inclusive of normal profit) of the representative firm by C, then P — C is the amount by which the selling price of the representative firm can exceed its own costs, and $\frac{P - C}{P}$ is the measure of the degree of its 'monopoly power' ".

At first sight this seems an eminently reasonable proposition since the proposed measure is directly linked with the notion of "cost of entry", and the idea of obstacles to entry is fundamental to any concept of monopoly. But reflection shows the suggested measure to be bristling with difficulties, especially from the standpoint of short-period analysis, for it involves all the difficulties surrounding the idea of "full cost" as a short-period concept. And, in a sense, the problem of monopoly power is most significant in its short-run aspects, for the elements of monopoly are being continually created, destroyed and re-created under the sway of the "perennial gale". It is our immediate purpose, therefore, to examine, in the light of these considerations, Dr. Kaldor's proposed measure of the degree of monopoly power.

1. "The Economic Aspects of Advertising", *Review of Economic Studies*, No. 45, 1949-50.

II

The more straightforward of the elements of the proposed measure is P, the price required to attract new entrants. To give precision to the concept it is necessary to consider the calculations which a potential entrant would make in deciding whether to enter and, if so, on what scale. He may be presumed first to consider his cost position. To this end he would prepare a schedule relating unit full production cost (inclusive of normal profit) to various volumes of output. This schedule defines a full cost curve, which is reproduced as the curve CC′ of Figure 1.

He must now turn his attention to conditions of demand. For each output x_i he may be presumed to calculate his cost of marketing this output at various levels of price. The cost of marketing his product, which we will call, following Kaldor, his "cost of entry" (into the market) and designate by E, must be interpreted in the broadest sense so as to embrace all costs of disposing of the given output, as against those involved in the actual physical reproduction of the product. This, of course, calls into question the whole problem of differentiating between production and non-production costs, the difficulties of which are well known. Kaldor, in the paper quoted, deals with this question at some length and it is not proposed to recover the same ground here. Without necessarily committing ourselves to Kaldor's suggested definition, we may, for our purposes, leave this difficulty with the understanding that it is one of those problems of classification with which all sciences have to grapple, there being no clear-cut lines in the real world.

Then for each output x_i there will be a best combination of price and non-price competition which will result in a *maximum* net revenue per unit, R_i. To each R_i there will correspond a best price P_i. These series define a net revenue curve RR′ and a price curve PP′, which are reproduced in Figure 1.

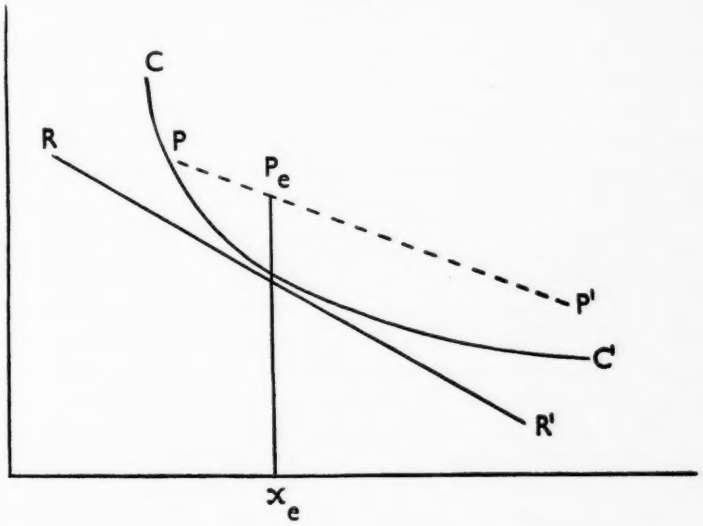
The revenue curve RR′ may be presumed to fall fairly rapidly (in a monopolistic market) as output increases, either in virtue of a falling P or a rising E necessary to attract the additional sales. The price curve PP′ may be presumed to fall less rapidly than RR′, owing to diminishing returns to selling outlays. As the market situation approaches the competitive, it is clear that PP′ and RR′ will tend to coincide and their slopes will approach the horizontal. This means that a given price differential will, of itself, be sufficient to attract any required volume of sales.

From Figure 1 it is easy to see that the price which "insiders" may charge without attracting "outsiders" is the price just less than that given by the point of tangency between the curves RR′ and CC′. For, if RR′ lies wholly below CC′, there will be no point of entry

which is profitable and, consequently, "insiders" can charge a higher price. If, on the other hand, RR′ lies above CC′ at any point, then at that point entry is attractive and the influx of newcomers will soon force down RR′ to the point of tangency.

Figure 1 also shows clearly the two major influences which will determine the ease with which newcomers may enter an industry. On the one hand, an expanding demand will raise RR′ since, in general, it will be easier to sell to new consumers than to break into existing markets. On the other hand, innovation will lower CC′, thus enabling the newcomer to offer greater price competition.

FIGURE I



III

We now turn to consider C, the "full cost" of production of an existing firm. (The concept of the "representative firm" has never been a particularly happy one, and, fortunately, it is unnecessary to our analysis.)

No difficulty arises in the case of current production costs, which we shall designate by c, that is with those costs for which the firm may recontract, and which it has to meet so long as production continues. These costs will include prime costs (wages and raw materials), salaries, ordinary overheads (telephones, printing and stationery, etc.), normal profit on working capital (since this can be varied in response to both output and value changes) and user cost. We assume, as is normally the case, that depreciation—wear and tear—

is continuously made good by maintenance expenditure, which is determined by *current* values. Obsolescence, of course, is in an altogether different category.

It is when we come to consider those costs of production which are fixed, either because they are embodied in past contracts (e.g. leaseholds) or represent expenditures which are "sunk and gone" into fixed capital equipment, that our real difficulty begins. Clearly the purchase price (the accounting value) is irrelevant here. Obviously, something in the nature of reproduction value is required. But reproduction value is a loose concept when applied to investment in capital equipment, for there may be no present market for the actual physical units being used in production. Actual equipment will differ from currently purchasable equipment in that it will, in general, have suffered obsolescence of greater or lesser degree. The value of the contribution of the existing equipment can, therefore, only be established in terms of its efficiency in producing the given product as compared with the efficiency of currently purchasable equipment, that is the most up-to-date technique available to a newcomer. This value we call the "product reproduction value".

Also, there is the question of excess capacity to be taken into account. In general, some excess capacity will exist. Often this general under-capacity working in manufacture is attributed to technological factors. But this not the most important reason. No entrepreneur building a new plant, or enlarging an old one, would dream of designing its capacity so as to "just fit" his anticipated immediate output. Some slack will always be provided. Apart from the diseconomies of subsequent ad hoc extensions and additions, every entrepreneur will want some excess capacity with which to meet sudden increases in demand, for it is much easier to form the habits of new consumers than to break consumers' habits once formed. At all events, irrespective of whether excess capacity is of the nature of a margin for expansion or of a technological character, the same considerations will operate for the existing firm and for the potential entrant.

But where excess capacity exists in excess of the "normal", the case is different, since this clearly represents an over-investment of capital in relation to current market conditions. The newcomer, on the other hand, can choose the scale of plant more appropriate to these conditions. Therefore, it is clear that capital sunk in excess equipment of this category cannot enter into the product reproduction value of the existing firm's capital.

To give precision to the concept of product reproduction value, let us call the capital cost of the most up-to-date technique available to the newcomer k_e. (Capital cost is defined as the estimated amor-

tization charge plus normal profit on capital invested.) For the moment we abstract from economies of scale or, in other words, we assume an identical output for the existing firm and for the new entrant. Then the full production cost of the new producer is defined as $C_e = k_e + c_e$, where c is current cost as defined above. Clearly then C_e is the reproduction value of the product and k_e is the contribution to this value of the capital employed. If c' is the current cost per unit of product of the existing firm, then $c' + k' = C'$ is the full cost of that firm. But since the value of the product is defined as C_e, then $C' = C_e$, and hence $k' = C_e - c'$; and k', related to the expected life of the equipment, gives the product reproduction value of the existing firm's capital equipment. This is so because the lower efficiency of existing equipment as compared with that available to the newcomer can only manifest itself in a rising c' *per unit of product.* Thus we define the full cost of an existing firm as being equal to the full cost of a new producer using the best available technique and producing an identical output. If outputs, then, are in fact identical—or, what amounts to the same thing, if economies of scale are absent—then clearly P — C will be equal to P— C_e which is equal to E, the cost of entry as defined in Section 2. This constitutes the first element of the degree of monopoly power.

We must now consider the more general case where the output of the existing firm differs from that of the newcomer. It is easy to see from the previous discussion that if $C_a = k_a + c_a$ is the full cost of production of a newcomer at the actual scale of output enjoyed by the existing producer, then $C' = C_a$ and $k' = C_a - c'$. But, in general, C_a will not be equal to C_e, for the existing producer may enjoy economies of scale not available to the newcomer. Thus, $C_e - C_a$ measures the shelter enjoyed by the extant producer in virtue of his established scale of output. Economies of scale which we designate by S are very important in practice and may often constitute the most important obstacle to competition from new entrants. Thus, $S = C_e - C_a$ is the second element of our measure of the degree of monopoly power and $P - C = E + S$.

We must now turn our attention to a point we neglected in the foregoing analysis. It will be recalled that we defined the capital cost of an existing producer as $k' = C_a - c'$ where C_a is the full cost of a new producer at the scale of output of the existing firm and c' is the firm's current cost. This is the general case, but it is important to notice two special cases. Firstly, we consider the case where $c' > C_a$ and, consequently, k' is negative. This means that the current cost of the existing producer is greater than the full cost of a new entrant at the same output. This may often happen in the face of rapid technological progress. Under competitive conditions this

would mean that the existing firm would have to re-equip or cease production. The firm has become extra-marginal. But under monopoly conditions a firm may continue in production so long as its monopoly elements, $E + S$, are sufficient to shelter it from the consequences of a $c' > C$. In other words, the firm does not become extra-marginal until $c' - C_a$ is greater than $E + S$ or, what amounts to the same thing, until c' is greater than P, that is when price fails to cover the current costs of production. This illustrates a facet of monopoly which is of fundamental importance, namely, that *the barriers to the exit of marginal firms are of exactly the same order as the barriers to the entry of new firms.* It will be clear then that we need make no amendment to the conclusions reached above for this case. A negative k′ will, of course, make a big difference to accounting profits, but will not affect the degree of monopoly shelter enjoyed by the firm.

A second special case must now be noticed, namely, where the current costs of production of an existing firm are lower than those of a newcomer at the same scale of output, that is c' is less than c_a. This means that the productive efficiency of the existing producer cannot be reproduced by the newcomer. The case where an existing firm enjoys advantages of purely managerial skill in the combination of factors is not the important case, since there is a market for this type of skill. It is true, of course, that a going concern may enjoy administrative advantages arising out of established practices, but I think the importance of this factor is commonly exaggerated. Where this factor is operative, it is probably best to treat the diseconomies attaching to the newcomer as a cost of entry. The case which concerns us here is where the efficiency of an existing firm *cannot be reproduced,* because the existing firm is in possession of secret or patented technical processes not available to a potential entrant. This type of monopoly shelter is very important in certain sectors of a modern economy, and it must be embraced by our measure of the degree of monopoly power. This element we call T, the shelter enjoyed by virtue of secret or patented processes of production, and clearly $T = c_a - c'$.

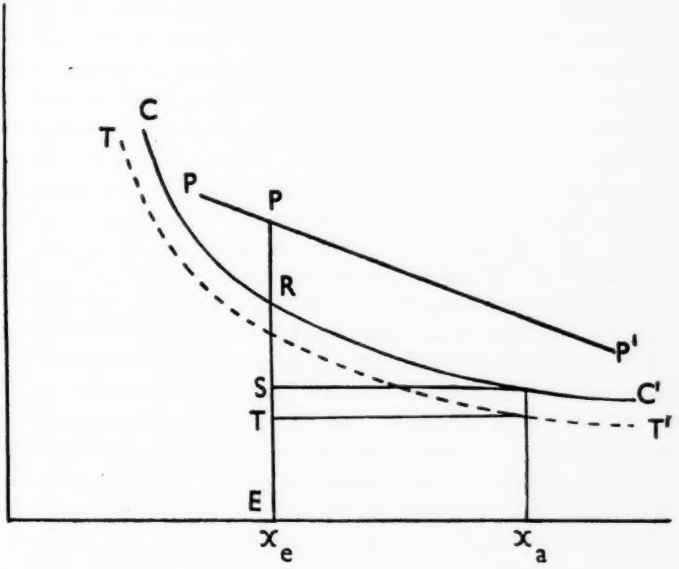
We are now in a position to define our general measure of the degree of monopoly power which we will designate by M. Then $M = \frac{P - C}{P}$, where $P - C$ is equal to $E + S + T$, and where

$E = P - C_e$ is the cost of entry;
$S = C_e - C_a$ measures economies of scale; and
$T = c_a - c'$ is the shelter provided by the possession of secret or patented techniques.

In any particular case, of course, any of these elements may be equal to zero.

To show these relationships graphically we produce the curves of Fig. 1, leaving out the net revenue curve RR′ for the sake of clarity. We add a "shadow" cost curve TT′ for those cases in which shelter of the nature of T is enjoyed. Clearly, the ordinates of this curve will be less than those of CC′ by an amount $c_a - c'$.

FIGURE 2



Then from Fig. 2 it is clear that $M = \frac{P - C}{P} = \frac{PT}{PE}$ and $E = PR$, $S = RS$, and $T = ST$.

IV

We have assumed so far, following Kaldor, that the price ruling within an industry will, in fact, approximate to P. It is now necessary to examine our measure of the degree of monopoly power in relation to the theory of price formation to see whether this assumption can be sustained. It is hoped to show that there are good empirical and theoretical reasons to believe that it can be.

In their well-known article on full cost pricing,[2] Messrs. Hall and Hitch have claimed, on the basis of empirical studies, that, in general, entrepreneurs do not calculate in terms of demand-curve and a marginal cost function. They have attributed this to the difficulty

2. Cf. Hall and Hitch: "Price Theory and Business Behaviour", *Oxford Economic Papers* No. 2.

experienced in practice of giving content to these concepts (as well as to the existence of virtually ubiquitous oligopolistic uncertainty).

The idea that business men neglect the concepts of elasticity of demand and marginal cost for this reason is difficult to believe. On the demand side, it must be recognized that in a dynamic economy prices do change considerably from time to time; and, moreover, seldom are these changes carried through instantly or simultaneously with changes in basic data. Consequently, one would expect that the entrepreneur would, on the basis of experience, form a fairly accurate picture of the shape of his demand-curve. Again, if marginal cost is integral to the process of rational pricing, it is hard to account for the little attention given this concept by business men and cost accountants.

It would seem, therefore, a much more likely explanation of entrepreneurial behaviour that business men recognize that the demand-curve for the group is, at any given level of income, very inelastic. Hall and Hitch, in fact, do explain entrepreneurs' reluctance to cut price in these terms on the basis of their investigations. In any case, recent sales tax experience should convince the most sceptical of the inelasticity of group demand. By contrast, the cross-elasticities of demand within the group are high. This is merely to say that, in general, business men recognize that intra-group price competition is ruinous all round. Consequently, the obvious thing for them to do is, so far as possible, to move along the group curve either by overt or tacit agreement. If the group curve is inelastic then the only limit to the movement of price upwards along this curve is the threat of attracting additional supplies from "outsiders". In other words, price will tend to be equal to entry supply price. This then explains the emphasis which business men place on full cost, for entry supply price is governed by full cost.

But there are more fundamental objections to the full cost thesis as stated by Messrs. Hall and Hitch. These may be summarized as follows:—

(1) The theory discards the principle of maximization of profits without providing any adequate alternative criteria. Notions of the "conventional" or the "customary" or of what entrepreneurs think "ought" to be are clearly inadequate as a basis for theory.

(2) It fails to provide any explanation for the "conventional" mark-up for profit and, consequently, one might say it fails to explain anything.

(3) It fails to provide any firm calculation of full cost on which price is alleged to be based.

(4) In so far as the kinked demand-curve is attributed to "fears" as to competitors' reactions, it does not examine to what extent these fears are "rational".

(5) Finally, the thesis appears to be at variance with the observed stability of the average percentage gross margin over the course of the business cycle.[3]

However, in Section 3 we were able to offer a firm basis for the calculation of full cost. The necessity for this is, of course, fundamental. But in our sense economic full cost is something quite different from accounting full cost. It corresponds rather with "standard cost", which is normally calculated by, or in conjunction with, technical men who are familiar with the comparative technological performance of their plant. It is interesting to notice the case cited by Hall and Hitch where a trade association distributes "standard cost" data to members. This seems an obvious attempt to provide more reliable comparative "performance" data. Again, the rationale for acceptance of price-leadership situations seems to lie principally in the fact that the price-leader is *known* to possess the best technical equipment. Accountants, on the other hand, perform a different function. Historically, accountancy serves, in the first instance to picture the firm's liquidity position. The "debit" and "credit" terminology is sufficient to indicate this. In recent years the accounting function has been adapted to the end of measuring actual costs against "standard" costs, which are *pre-determined*. But these studies are confined to variable costs only. The treatment of fixed costs is purely formal.

It is suggested therefore that our definition of full cost is appropriate to observed business behaviour. Moreover, in our analysis, the margin for profit is also determinate, being given by M. Hence full cost will be equal to C, and the margin for profit per unit of product will be P — C. At least this will be the case where normal profit (interest on capital) is included in full cost. Clearly, the kink in the demand curve will be found at P, the entry supply price. Furthermore, it is easy to see that this hypothesis does not involve abandonment of the principle of the maximization of profits.

A word must now be said about the problem of oligopolistic uncertainty which has been given a central place in explanation of the kinked demand-curve. Thus it is claimed that entrepreneurs do not raise price because they "fear" that they will not be followed; they will not cut price because of the "fear" that they will be. That there exists some element of oligopolistic uncertainty in the real world

3. Cf. B. M. Cheek, "Industrial Pricing", *Economic Record Supplement*, August, 1949. "It follows for this theory that when prime costs fall in depression as materials cheapen and wages are cut, 'g' should rise sharply".

can hardly be doubted, but it can easily be seen that this is not the *general case*. For example, there is plenty of evidence to show that entrepreneurs, even in comparatively atomistic industries, do combine where their common interest is concerned, e.g. in their dealings with labour. Moreover, the widespread existence of accepted price-leadership situations, by definition, rules out this kind of "uncertainty".

Finally, we may notice that our redefinition of "full cost" in terms of the reproduction value of the product is consistent with the observed stability of the average percentage gross margin. This is clearly not the case if we interpret full cost in the everyday bookkeeping sense.

Moreover, it is easy to see that the considerations outlined above are implicit in traditional monopoly analysis. For the fundamental step taken in the development of this theory was, following Sraffa, to shift attention from the industry to the firm, each firm being considered to have its own private market. In its extension to the oligopoly case, theory postulates a cluster of firms enjoying an insulated market situation. ("Fewness" will, normally, only have meaning in relation to a limited market.)

Now the very factors which break up the total market into smaller segments, that is which go to insulate these segments, one from the other, make it inevitable that the impact from new entrants will impinge significantly on established "private" markets. Under competitive assumptions the additional supply from newcomers may be conceived as spreading throughout the market without any significant effect on the sales of any particular producer. Once we assume, however, that producers sell in an insulated private market then clearly the case is quite different for, by definition, the spreading effect of additional supply will be inhibited.

This is best seen where the insulation of markets is spatial in character. The supply emanating from a new entrant may have a negligible effect upon the majority of producers within the "industry", but it is certain to have great significance for *some* producer or producers, namely, for those producers within whose separate market the newcomer settles. And every extant producer must take account of this threat to *his* market. Exactly the same considerations apply in the case of product differentiation.[4] That producers of differentiated products are consciously on the defensive against this possibility is evidenced by their preparedness to dissipate a large proportion of their profits on selling expenditures, a proportion which intra-group competition is powerless to explain. On our assumption of inelastic

4. Cf. A. P. Lerner: "Location is not the only variant of this kind, but rather the simplest species of a large genus . . . Every specialized gradation of every particular quality of every 'commodity' may be treated as 'distance' . . .", "Monopoly and the Measurement of Monopoly Power", *Review of Economic Studies*, Vol. I.

group demand-curves, then the only upward limit to price in a "tight" oligopoly situation is the potential threat from outsiders (apart, perhaps, from the possibility of State intervention).

In terms of the demand-curve, this vulnerability of "private" markets to entry may be expressed by saying that the firm's demand-curve (Chamberlin's dd′ curve) is, unlike the downward sloping Marshallian demand-curve (the prototype of Chamberlin's DD′ curve), not independent of conditions of supply. This makes it inevitable that the curve facing the firm (or cluster of firms) should be kinked at the point at which an additional supply will enter the market. Alternatively, we may express this fact by saying that, in general, these "private" markets are oligopolistic as to entry.

V

In this concluding section it is proposed to compare briefly the measure of the degree of monopoly power elaborated in this paper with that of Dr. Kalecki, viz., the percentage gross margin.

In Section 3 we defined the full cost of an existing firm as C_a, the full cost of a new producer at the same scale of output as enjoyed by the extant firm. This is equal to $C' = c' + k'$. Clearly, c' comprises two elements—prime costs and current overheads. If we designate current overheads by o', then total overheads are equal to $o' + k'$. Then, if we call $\frac{o' + k'}{P}$ the "overhead structure" of the enterprise and denote it by O, the percentage of gross margin, μ, is equal to $O + M$.

It is this overhead component which represents the fundamental weakness of Kalecki's analysis. The way in which this factor vitiates the Kalecki thesis is best shown from his own data. In *Studies in Economic Dynamics* he shows that in the year 1937 for the United States the percentage gross margins were 24.8 per cent. for manufacturing, 12.9 per cent. for wholesaling, and 28.7 per cent. for the retail trades. Now, if these figures *measure* the respective degrees of monopoly, then we must conclude that manufacturers enjoy approximately double the monopoly shelter of wholesalers, while retailers enjoy even greater shelter again. Obviously, these figures *mainly* reflect the differing overhead structures of the respective classes of enterprise. And once we admit of some other factor entering into the determination of the *absolute* value of μ, then the taking of a weighted average becomes completely meaningless.

Alternatively, the presence of this overhead factor in the percentage gross margin may be seen from the fact that M, unlike μ, approaches zero as an industry approaches the competitive. Thus,

when M = O, only normal profits are earned. In general, of course, profit in our sense is something quite different from accounting profit.

At first sight it might appear that the essential difference between the thesis presented in this paper and that of Kalecki is that ours is a theory of the "long-period", whereas Kalecki's is based upon "short-period" postulates; and that, if our theory appears to correspond more closely with the facts of the real world, this means that entrepreneurs are, as a matter of fact, guided more by long-period considerations than is normally envisaged in short-period analysis. But this, I feel, is to miss the main point. For I think it can be shown that, on Kalecki's assumptions, the short-period (in the traditional cost sense) ceases to have any real meaning.

Kalecki advances an iso-elastic concept of pricing which implies that the elasticity of demand does not change appreciably in the short-period.[5] He also assumes that marginal cost is constant in the short-period. Then, one may ask, *what does change in the short-period?* What are the essentially short-period *variables?* It is true, of course, that the *amount* of demand may vary. But in the absence of "bottleneck factors" this will not affect price, since it merely involves movement along a horizontal marginal cost curve. And, if there is one point upon which Kalecki is persuasive, it is that "bottleneck factors" are unimportant in the Spätkapitalismus (except, of course, where the system is primed by armament expenditures—or is getting over the consequences of them).

Thus, on Kalecki's assumption of general excess capacity, the traditional concept of the short-period, in which an additional increment of supply is squeezed from a fixed stock of equipment, dissolves. More precisely, it becomes a special case corresponding to "practical capacity" output or, since in the Kalecki scheme, labour is likely to be the limiting factor, corresponding to the special case of employment theory, viz., "full employment".

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5. That is, so far as the sensitivity of consumers' preferences (the substitutability of the products) is concerned. (Cf. Schumpeter, *Business Cycles* (1939), p. 73: "We will, throughout, act on the assumption that consumers' initiative in changing their tastes . . . is negligible and that all change in consumers' tastes is incident to, and brought about by, producers' action". The other factors determining the gross mark-up in the Kalecki model, e.g. transport costs, the degree of oligopolistic cohesion, the fear of new entrants, etc., operate on μ in precisely the same way as upon M.

THE PRE-WAR DEMAND FOR WOOL

I. The Equation of Demand.
II. The Nature of Manufacturers' Demand.
III. Analysis of Consumers' Demand for Clothing: Time-series and Family Budget Data.
IV. Analysis of Manufacturers' Demand for Wool.
V. Relationship of Wool Price to Wool Clothing Price.
VI. Results, Inferences and Summary.

I

The following article gives and explains the results of some statistical studies done in 1947-48 on the pre-war demand for wool in the United States and the United Kingdom, in rather more detail than was possible in an earlier note.[1] Although the data in many cases were rough, and the method leaves much room for improvement,[2] the continued topicality of the subject-matter seems to justify a more comprehensive record.

The aim of the studies was to estimate, from time-series and whatever other information was available, the price and income elasticities of demand for wool in the United States and the United Kingdom in the pre-war period. The use of time-series to make quantitative estimates of demand elasticities, as evolved by Henry Schultz and others[3] requires first a satisfactory compliance with a number of conditions: (i) there must be a "routine of demand", (ii) this routine must be capable of expression in an equation in which other major influences on demand, beside price, have their proper part, (iii) statistics must be available to measure these influences, and (iv) the influences, or the statistics used to measure them, must not be inter-related in other ways beside the demand equation, otherwise the data will not necessarily yield the routine of demand, but perhaps something else.[4]

The first condition, in studies of this kind, can rarely be more than an assumption—the expectation of regularity in economic behaviour—but it is an assumption that seems more justified in a study of the demand for a given commodity, as in the present case, than in some attempts that have been made to apply it to statistical compounds such as the demand for exports or imports as a whole.

The last condition, also, cannot be guaranteed, and is frequently deficient in economic studies. In demand studies the essential is to

1. "The Demand Equation for a Raw Material in Empirical Studies", *Economic Record*, June, 1949. The studies were done during tenure of the Walter and Eliza Hall Economics Research Fellowship of the University of Sydney.
2. For example, no attempt has been made to adopt the technique since suggested by Cochrane and Orcutt for dealing with the problem of auto-correlated time-series. See D. Cochrane: "Measurement of Economic Relationships", *Economic Record*, December, 1949, pp. 13-16.
3. See especially J. R. N. Stone, "The Analysis of Market Demand", *Journal of the Royal Statistical Society*, vol. cviii, 1945.
4. See Stone, *op. cit.*, pp. 295, *et seq.*

ensure that a supply relationship is not creeping in, as it obviously could at first sight, in an attempt to correlate price and quantity consumed. The first safeguard against this is to select the right "other" influences on demand for inclusion in the equation. Beside this, in the present studies, consumption was not equal to (local) supply, because of the substantial imports of the commodity. In case of any remaining inter-correlation between the causal influences which would have produced a spurious result, the technique of confluence analysis was used in order to detect it.[5]

The second of the requisite conditions, viz. that the routine should be expressible as an equation in which all the major influences on demand appear, was satisfied in the case of wool only by the adoption of a set of three equations in place of the usual one. As suggested in the writer's earlier note,[6] the "consumption" of a raw material cannot be directly explained in terms of price, national income, and the price-level of other commodities, which are appropriate rather to the market for finished consumers' goods. The influence of national income is remote in time, operating through the demand for the finished product, and the price-level of "other commodities" is not relevant, except either as that of other directly substitutable raw materials, or as the remote influence of the price of "other" finished products. Even price has not a clear negative influence on demand for a raw material, at least in the short run where expectations of rises or falls may be more important than its level. In the set of equations used, separate elasticities were estimated, (a) linking the quantity of clothing bought by consumers with its price, at given levels of national income and other prices, (b) linking the quantity of raw wool used by manufacturers with its price, at given levels of output, and (c) linking the price of wool clothing with the price of raw wool. The required price elasticity of demand for raw wool was then obtained by the appropriate combination of these parts. As shown in the Appendix (section 5), this price elasticity is given by adding (b) to the product of (a) and (c).

II

To see how well this conclusion agrees with the practical view of the demand for wool, it is necessary to look at the facts of the wool textile and clothing industries. It is well known that wool has a low price elasticity of demand. The reasons for this are well set out in a paper of Dr. Gerda Blau.[7] Briefly, the main reason is that if, for example, the price of wool doubles, the consumption of wool clothing

5. See Stone, *op. cit.*, pp. 297-310.
6. *Economic Record*, June, 1949.
7. "Wool in the World Economy", *Journal of the Royal Statistical Society*, vol. cix, part iii, 1946.

will fall much less than proportionally, because its price will not nearly have doubled. If the cost of wool amounts only to one-tenth the cost of the garment, the rise in price may be only ten per cent. Of course it may be more than this if "pyramiding" occurs—that is to say, if the change in price is magnified because the margins of retailers, wholesalers and manufacturers are fixed at so much per cent. of the cost price. But even so the rise will still be only a small proportion of the price of the garment. Apart from pyramiding, which is dealt with in the Appendix (section 4), this explains the latter half of the statement with which Part I concluded, that is, why (a) is multiplied by (c).

But this is not the whole story. The first part of the statement is explained as follows. The manufacturer of the cloth, faced by higher prices for the raw material, will do what he can to cheapen his purchases. He may use a lower quality of wool, or he may use a higher proportion of wool recovered from old rags, or he may include a proportion of rayon or cotton in his mixture. All these are different forms of what may be called fibre substitution. There is considerable flexibility in the choice of materials open to the manufacturer, especially when he is making woollen cloth, as distinct from worsted.

A note on these two main types of wool products will make this clearer. Worsteds are the smooth-finished durable fabrics of which so many men's suits are made; woollens include all the rougher and softer-finished fabrics such as tweeds and overcoat materials, blankets and so on. The technical distinction is that worsted yarn is spun from combed wool, while woollen yarn is not. The combing picks out the longer fibres of the wool and lays them parallel before they are spun. The result of the combing is called tops, and from tops are spun the smooth even yarn called worsted. Since woollen manufacturers, on the other hand, do not require length or evenness of fibre, in fact prefer to blend uneven fibres together, there has always been scope in woollen spinning for the use of fibres other than raw pure wool. We read that districts, such as the Dewsbury district of Yorkshire, gained much of their living from the reclamation of used wool from old garments or rags for re-use by the woollen trade. It was a commonplace that whenever the price of raw wool rose the shoddy mills of Dewsbury flourished. Thus long before the advent of staple fibre there was a constant price competitor in the woollen branch of the industry. The proportion of recovered wool used in the pre-1914 period in the United Kingdom was very high; the Wool Working Party Report states that in 1907 only about a quarter of the fibre used in the manufacture of woollen yarn was raw wool.[8] The use of

8. Board of Trade, Wool Working Party Report, H.M.S.O., 1947. According to one witness "they hoisted the flag at Morley Town Hall when a bale of wool arrived".

raw wool in woollen fabrics has increased since then, but it was still only between 50 and 60 per cent. in 1946.

Another competitor that raw wool has always had to face is raw wool itself—that is, cheaper grades of it. Australian merino, of course, has long been in special demand—nevertheless there has always been a margin at which substitution of cheaper wool would take place if the price went high enough.

The third class of competitors is fibres other than wool, of which cotton has for many years been an appreciable example. It is important to stress here the distinction made by Dr. Gerda Blau between competition between fibres and competition between fabrics.[9] Wool fabrics have for a long time had to meet competition from cotton and silk fabrics. One reason why rayon made such progress in the 'twenties and 'thirties was that women's frocks of rayon could be made more cheaply than frocks of silk, cotton *and* of wool. But it is not that type of competition that we are concerned with here. We are considering here the choice of the wool manufacturer in blending his fibres. Rayon became a useful alternative to him in spinning mixed woollen yarn, especially in underclothing mixtures, and by the second half of the thirties it had also become a potentially important component even of mixed *worsted* yarns. The high prices for wool reached in 1936-37 led to a sudden increase in the amounts of staple fibre "tops" used in the spinning of worsted yarns, both in the United States and the United Kingdom. Of course wool substitutes at the time were being widely used for reasons of state in Germany, Italy and Japan, and the amounts used in America and Britain were small compared with these. But their importance was greater, as they were being used in free markets mainly for reasons of price.

Thus, at the end of the 'thirties there was a good deal a wool manufacturer, whether of woollen or worsted fabrics, could do when confronted with a rise in the price of wool, apart from passing it on to the consumer. In fact, as it appears from the studies described in this article, it was fibre substitution by manufacturers, rather than the responsiveness of consumers, that gave the demand for wool most of its elasticity. This explains the first half of the statement concluding Part I above.

Fibre substitution by wool manufacturers was particularly marked in the United States, where it was encouraged by the custom of manufacturers of producing a cloth to meet a fixed conventional price-line. A manufacturer of men's suits might have a retail price-line of, say, $27.50, for which he expected mills to supply cloth at $1.75 a yard, year after year, whatever the price of wool. Obviously the weaver would vary considerably the quality of his cloth, and the

9. Blau, *op. cit.*

quality and composition of the fibres in it. This custom was encouraged by the fact that until 1941 there was no labelling legislation in the United States, and it was therefore difficult for the consumer to guess how much of the fibre in his garment was not pure wool.[10]

Price-lines and pyramiding are difficult to reconcile—but they must be reconciled, if the mechanics of the demand for wool are to be reduced to measurable form. If there are fixed price-lines and fibre substitution is practised, the implication is that a change in the price of wool will go no further, and will not affect the price of wool clothing. But if pyramiding occurs the implication is that a given price change will be passed on to the consumer in augmented form. The two *can* be reconciled—it all depends on how one defines the quantities of wool cloth, garments, etc., in terms of standard qualities. But it is difficult, as the question of how clearly consumers—and price indexes—can recognize qualities is involved. Some arbitrariness is therefore unavoidable, and in this case it took the form of assuming that the influence of products made to fixed price-lines (and whose changes of quality are not recognized by consumers) is just offset by the influence of pyramiding where it operates. (See Appendix, section 4). Although arbitrary, it can be shown that this choice affects the final estimates only within narrow limits.

III

The first step in the estimation of the price and income elasticities of demand was the analysis of the demand for clothing from time-series. There being no annual data on the consumption of wool clothing, statistics of clothing consumption in general were used in the time-series analysis, both for the United Kingdom and the United States, and these were adjusted later in the light of other information. The consumption of clothing (measured by deflating expenditure by a price index) was correlated with the three variables,[11] "real" income (national income deflated by a price index) and price indexes of clothing and "all other" consumers' goods and services. All these variables were expressed in logarithms, the expectation being that the functions would be approximately linear in logarithms, and that the coefficients obtained would therefore themselves be the required elasticities. Time in years was tried as a fifth variable, to reflect any trends in tastes or other factors there may have been, but it added nothing to the explanation. Sources of data and details of the resulting estimates of price and income elasticities are given in the Appendix (sections 6 and 1). No attempt has been made to calculate any

10. The effect of the labelling legislation of 1941 on post-war demand is a subject of some interest to Australia, and one that seems worth investigation.
11. See Stone, *op. cit.*, p. 292.

of the usual statistical limits in respect of these results; this would be useless with time-series like these where serial correlation is certainly present. The multiple correlation coefficients are given, but these, of course, are not a guide to significance. All that could be done was to try to fit as many independent sets of data to the equation as possible and compare the results.

Next, independent estimates of the income elasticity of demand were made from family budget data, using material collected in the United Kingdom in 1937-38 and 1938-39, and in the United States in 1935-36. The estimates were made partly by the method of Allen and Bowley,[12] and partly by plotting clothing expenditure and income directly in logarithms, and reading off the gradient of the linear curve fitted to the results. The estimates obtained are shown in the Appendix (section 2). Apart from the comparatively high results obtained for clothing (greater than unity, in many cases), the chief interest in them lies in the fact that for the United States, where expenditure on wool clothing could be separated from that on footwear and the rest, there was a higher income elasticity of demand for wool clothing than for other types of clothing. This was true of every study made with the United States data, whether for large cities, small cities, villages or farms, in northern, southern or western regions, for husbands, wives, or all family members combined. This was not merely due to the fact that the other types of clothing included footwear; although it was true that footwear in these studies had an income elasticity lower than other types of clothing, the differential was equally marked between wool clothing and other types of clothing, excluding footwear. For the latter the elasticity was in most cases around unity or slightly below, while for wool clothing it was markedly above unity, in every study except those for the farms of the north and west. The importance of the fact that people on higher incomes spent a higher proportion of their incomes on wool clothing than other people, but not necessarily on other kinds of clothing, needs no stressing. Another very clear fact which emerged was that the urban populations were consistently heavier wool users than the rural populations, income for income, and that the bigger towns used more wool per head than the smaller towns. This is a point that may be important in other countries, where urbanization is going on rapidly.

In order to be able to apply these results to those obtained from time-series, one would like to be sure that one was dealing with the same concept. Obviously this is not so, strictly speaking; the variation of expenditure on clothing between income groups in the community is not the same concept as the variation of total expenditure on

12. R. G. D. Allen and A. L. Bowley: *Family Expenditure, a Study of its Variation.*

clothing by the community at two different income points in time, even though we call them both income elasticity of demand. It has been demonstrated that mathematically there is no reason why the two concepts should be equal in value;[13] at the same time it has not been shown by how much they might be expected to differ. What has to be decided here is whether we are entitled to assume that the *order* of values is the same; if wool is higher than other clothing in one sense is it also higher in the other? If so these results may be used to adapt the time-series estimates for clothing to estimates specifically for wool clothing.

It was assumed that it was; and from the range of estimates of income elasticity obtained from time-series (see Appendix, section 1) for clothing in general, it was estimated that the corresponding figure for wool clothing probably lay in the region of 1.1, both for the United Kingdom and the United States. Beside this, it seemed fair to assume that the same properties which made wool clothing more income-elastic than other clothing would also operate to give it a greater price elasticity—tending to be more durable, to be bought in larger units than other clothing, and, therefore, to be a more "postponable" item of purchase. Moreover, it seemed reasonable to allow the part a greater price elasticity than the whole, insofar as there could be substitution between the parts. However, another factor had to be taken into account—the stage at which the element of quality variation in expenditure was reflected in the results. As the "consumption" of clothing explained by the equation of demand had been estimated by dividing expenditure by a price index for clothing, the values of the price elasticities obtained from this equation already reflected the variation of quality on the part of consumers in their purchases, as well as the variation of quantity—at least to the extent that the price index used was based on commodities of standard quality. In the further analysis of manufacturers' demand elasticity, the variation of quality, as well as quantity, was again required to be reflected, but although the latter could be separated completely from the effects of changes in consumers' demand, by means of the analysis of manufacturers' demand "per unit of output", it was not possible to make this variable absorb also the effects of quality variation on the part of consumers. In other words, part of the quality variation practised by manufacturers in response to changes in wool prices may have been in anticipation of quality variation by consumers in response to changes in garment prices, and this element would be duplicated to some extent in both elasticities of demand. In an attempt to avoid this it was decided arbitrarily

13. T. Haavelmo: "Family Expenditures and the Marginal Propensity to Consume", *Econometrica*, October, 1947.

to make a slight downward adjustment in the estimates of the price elasticities of demand for wool clothing. With this taken into account, together with the influences considered likely to give wool clothing a greater price elasticity than clothing in general, it was estimated from the results obtained for clothing that the price elasticity of demand for wool clothing in the pre-war period, in both the United Kingdom and the United States, was probably in the vicinity of *minus* 1.0.

IV

In the analysis of manufacturers' demand, the problem was reduced to one of two variables: the consumption of raw wool by manufacturers per unit of output, and the price of raw wool. It was not possible to include the prices of fibres that can be substituted for wool, because the price of the principal substitute during the period, recovered wool, was itself closely determined by the price of wool. It seems plausible, however, that the wool price, rather than its relationship with those of other fibres, should have been the dominating influence, so that the exclusion of substitute prices from the analysis does not by any means misrepresent what might have been expected. The exclusion of wages and other manufacturing costs, which might have been expected to influence the purchase of wool by manufacturers, was due to the lack of suitable statistics, but these costs were almost certainly very stable in comparison with the price of wool. Output was not represented as a separate variable, but was divided directly into consumption, thereby implying an elasticity of unity with respect to output. Tests with United States data showed this to be fairly close to the truth, and with the United Kingdom data it seemed safer to make this fairly reliable assumption than to submit a limited number of imperfect observations to an equation including a third variable.

In this form the equation is suitable for the measurement of price elasticity, free from the influence of speculative demand, or any other type of demand derived from expectations of price change, rather than the level of price itself. This follows from the facts that the dependent variable is consumption, and not purchases, per unit of output,[14] and that although many changes in wool consumption by manufacturers occur as a result of a change in price expectations (because of the importance of cloth and garment inventories in the cycle of demand), these affect both consumption and output equally.

14. Although the nearest approximation to consumption that could be made with the United Kingdom statistics was an estimate of raw wool available for consumption, compensation was made by the fact that the only measure of "output" that could be used was an estimate of the raw wool *and other fibres* available for consumption by the wool textile industry. Thus any purchases due to changes in price expectations, or any change in stocks at all, would affect both alike and would not affect the estimate of the price elasticity. Similarly changes in export demand for United Kingdom tops, yarns or cloth would affect both alike and would cancel out.

The only remaining change in wool consumption, i.e. which the present form of equation can possibly ascribe to a change in price, is that due to the substitution of other fibres.

To extend the scope of "other fibres" to include cheaper grades of raw wool, an alternative form of the equation was also used. Instead of measuring consumption by the weight of wool consumed or available for consumption each year, the estimated value of this wool[15] was divided by a price index of wool, so that the resulting figures measured consumption with the effect of price changes on both quantity and quality reflected in it. In this form the price elasticity estimated would include an element to measure the extent to which manufacturers varied the quality of their wool consumption, as well as their substitution between wool and other fibres, in response to price changes.

By fitting linear regression lines to the logarithms of the data, using the method of least squares, the price elasticity of manufacturers' demand was estimated at about minus 0.4 in both the United Kingdom and the United States, when both quantity and quality variation were included. Without quality variation it was about minus 0.1 in the United Kingdom and about minus 0.2 in the United States. The latter figure was roughly confirmed by two other estimates based on machine activity statistics and census data on fibre consumption by the wool textile industry, instead of an index of output. (See Appendix, section 3.)

V

To estimate the relationship of the price of wool to the price of wool clothing, since we are assuming that the effects of pyramiding and manufacturing to fixed price-lines just offset each other, requires an estimate only of the ratio of the two prices expressed in a common unit, say per lb. (See Appendix, section 4.) The ratio will obviously vary a good deal with the price of wool itself; as it was desired to use the figure appropriate to the end of the period studied, the method of measurement used was, for the United Kingdom, to estimate the ratio from the latest Census data (for 1935), calculate from this the "transformation cost" per lb. at that date, and estimate from it the equivalent 1938 figure, taking account of the trend of wages in the intervening period. For the United States there was already available an estimate of the ratio of wool price to wool clothing price for the year 1939,[16] and the transformation cost derived from this was adapted to the year 1938. This ratio was 0.14, compared

15. The estimates were obtained from declared values of imports and estimated values of domestic production. For the United States the latter were the official estimates of farm values adjusted to a mill basis.

16. Howell, L. D.: *Marketing and Manufacturing Margins for Textiles* (U.S. Dept. of Agriculture Technical Bulletin, No. 891, 1945).

with one of 0.08 estimated for the United Kingdom for 1935, from Census data.[17]

VI

Combining the various elements gives a total price elasticity, at the average prices ruling in 1938, of approximately minus 0.5, for both the United Kingdom and the United States. This is obtained by taking the consumers' price elasticity of minus 0.1, multiplying by the ratio of wool price to wool clothing price (about 0.1), and adding the price elasticity of manufacturers' demand (about minus 0.4). For prices above the 1938 average these elasticities are slightly higher, arithmetically, owing to the higher ratio of the prices found. (See Appendix, section 5.)

On these results, and those given earlier for income elasticity, a few comments may be made by way of inference and summary.

(1) With income elasticity estimated at about 1.1, and price elasticity at about minus 0.5, these results support the widely held view that income is more important than price in determining the demand for wool.

(2) Price elasticity of less than unity means that a given fall in price will not lead to such an increase of demand as to make the total proceeds of sale increase. This is not necessarily true of any individual supplying country by itself, of course, but it is true of supply as a whole.

(3) The price demand curve owes more of its elasticity to manufacturers' demand elasticity, due to substitution between qualities and kinds of fibre, than to consumers' demand elasticity, due to substitution between wool clothing and other types of clothing and other types of goods.

(4) More than half of the elasticity of manufacturers' demand was due to substitution between qualities of wool, rather than between wool and other fibres. The data being mainly for the inter-war period, however, the possibilities of fibre substitution, as they existed at the end of this period, would not be fully reflected in the results.

(5) The family budget studies show that, between income groups in the United States, consumption of wool clothing increased more sharply with income than consumption of other clothing.

17. These ratios are appropriate only to wool prices at the average levels of these years; the purpose of deriving transformation costs from them was to enable them to be adapted for measuring the ratio that would have been found at different levels of price. This does not mean at different times throughout the period: it means, in 1938, through a range of prices in the functional sense. It is true, of course, that the transformation cost per lb. of wool used will not be strictly independent of the price of wool, because a change in the price of wool, causing a change in the proportion of other fibres used, will mean a different transformation cost. But the low price elasticities of manufacturers' demand obtained suggest that this change in transformation cost will be extremely small in relation to the change in the price ratio, and has been neglected.

(6) The analysis on which these estimates are based being a static one, it may be considerably out as a basis for year-to-year forecasts, which could be strongly influenced by speculative elements. These were apparently strong, during the period studied, in the United States, where it often appeared during the 'thirties that a rise in price would lead manufacturers to buy and use *more* wool—because it was thought it would rise further. A fall in price, similarly, was often met by a drop in buying, as manufacturers attempted to wait until prices had "touched bottom". In fact there is evidence of a two-year cycle of demand in the United States, apparently due to the important part played by inventory profits and losses. This phenomenon deserves closer study than it has so far received. The quantitative studies described in the present paper are not affected by "dynamic" vagaries of this kind, as they analyse mill consumption of wool at given levels of output, and then analyse the "output" separately in the form of the consumption of wool clothing. Output and consumption are only equal "over a period", the short-term differences between them being a reflection of the "dynamic" effects left out of these studies. The elasticities obtained, therefore, should be thought of as attempting to describe the fundamental relationships governing the positions about which speculation and inventory cycles may cause prices and consumption to fluctuate.

(7) For the same reason the results cannot be subjected to the usual "verification", which consists in calculating "theoretical" data back from the elasticities obtained, and comparing it with the original data.

(8) The results look as though they should offer useful information about the effects of variation of the exchange rate, and on the effects of changes in oversea income on our wool receipts. This is true, but it will be found that little useful can be concluded without assumptions being made about supply elasticities in Australia and other countries, and without allowance being made for the proportion of the export market which Australia supplies. This is another question in which the demand elasticities play a part, but only a part.

(9) The suggested division of the price elasticity of demand for wool into its three elements may provide a useful framework in the consideration of the effects of future technical developments. Changes in the technique of producing fibres or fabrics, including the development of new wool substitutes, may be considered from the viewpoints in turn of their effects on consumers' demand for the finished product, as against clothing made of other fibres, on manufacturers' demand for wool as against the new substitute, and on the relationship of the price of wool to the price of wool clothing. This will throw light on

the extent to which and the manner in which technical developments in the field of substitutes may make the demand for wool more elastic with respect to price, as they may be expected to—although it will not enlighten us on the extent to which wool may be displaced.

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APPENDIX: SUMMARY OF EQUATIONS AND RESULTS

(1) *Equation of consumers' demand for clothing (time-series).*

Log (quantum of clothing purchased) $= a + b$ log (national income at constant prices) $+ c$ log (clothing price index) $+ d$ log (index of retail prices other than clothing) . . . . . (1)

Results:—

TABLE I.—ELASTICITIES OF DEMAND FOR CLOTHING, TIME-SERIES

	Income elasticity of demand (b)	Price elasticity of demand ($c - bw$)*	Multiple correlation coefficient
United Kingdom—			
All clothing, annual, 1920-38 ..	0.79	—1.11	.855
United States—			
All clothing, annual, 1929-41 ..	0.59	—0.72	.971
All clothing, quarterly, 1935-40	1.12	—1.11	.973
Clothing, other than footwear, annual, 1929-41	0.62	—0.51	.942

*Where w is the proportion of income spent on clothing. In this equation, c reflects the net effect of price changes, "real" income constant; but what we want for price elasticity in our sense is "real" income constant *except for the slight change due to the price change itself.* Therefore we increase the (negative) value of c by subtracting bw to measure the "income effect" as well as the "substitution effect" of price changes. See Stone, *op. cit.*, pp. 292-3.

As explained above, from the results relating to the demand for clothing in general, the income elasticity of demand for wool clothing was estimated as being of the order of 1.1 for both countries, after taking into account the probable differential between wool and other clothing suggested by the family-budget results (equations 2a and 2b below). For price elasticity, after taking account of a possibly similar differential between wool and other clothing—and also the need to avoid duplication of the element of quality variation by consumers, which would also be included in the estimate for the price elasticity of manufacturers' demand (equations 3a and 3b below)—an estimate of the order of *minus* 1.0 was made for both countries.

As appears from section 4 below, this estimate could have varied within fairly wide limits without affecting greatly the final estimate for wool; for example if it had been *minus* 1.2, instead of *minus* 1.0, multiplying by the price ratio would have given only about *minus* 0.12, instead of *minus* 0.10.

Having made this estimate, we can now refer to equation (1) as though it described the demand for wool clothing, instead of clothing *in general*, as it would have, had the statistics been available.

(2) *Equation of consumers' demand for clothing (family budget data).*

Expenditure of income-group on clothing $= g + h$ (average income of income-group) .. .. (2a)

Log (expenditure by income-group on clothing) $= j + k$ log (average income of income-group) .. .. (2b)

Results:—

TABLE II.—INCOME ELASTICITY OF DEMAND FOR CLOTHING*
FAMILY BUDGET DATA

	Foot-wear	Other clothing	All clothing
United Kingdom—Working class (1937-38) ..	1.02	1.29	1.17
Public officials (1938-39) ..	0.58	0.98	0.94

	Foot-wear	Wool clothing	Other clothing	All clothing
United States (1935-36)—				
New York City and Chicago, white families:				
Husbands	0.88	1.22	0.96	0.98
Wives	0.90	1.28	1.20	1.16
All family		1.28		1.20
Small Cities, North, Central and West:				
Husbands	0.57	1.17	0.77	0.92
Wives	0.61	1.07	1.03	0.98
Villages, North and West:				
Husbands	0.62	1.34	0.86	0.92
Wives	0.63	1.14	1.06	0.99
Villages, South-east, white families:				
Husbands	0.69	1.14	0.93	0.86
Wives	0.69	1.11	0.98	0.94
Farms, North and West:				
Husbands	0.31	0.80	0.44	0.52
Wives	0.39	0.75	0.57	0.57
All family		0.82		0.59
Farms, South-east, white operators:				
Husbands	0.48	1.14	0.65	0.78
Wives	0.53	1.13	0.86	0.88
All family		1.13		0.89

* ($= k$ in equation 2b, or h divided by proportion of group family income spent on clothing, in equation 2a.)

(3) *Equation of manufacturers' demand for wool.*

Quantity variation only:—

Log (quantity of wool consumed per unit of output) $= m + n$ log price of wool) .. .. (3a)

Quantity and quality variation:—

Log (value of wool consumed ÷ standard-quality price of wool, per unit of output) $= q + r$ log (price of wool) .. .. (3b)

Results:—

TABLE III.—ELASTICITY OF MANUFACTURERS' DEMAND FOR WOOL AT CONSTANT OUTPUT

	n (Quantity variation only)	r (Quantity and quality variation)
United Kingdom (1924-38)	—0.09	—0.37
United States—(i) (1922-39) Using output index to measure output	—0.18	—0.42
(ii) (1922-39), using machine activity to measure output	—0.24 woollen —0.08 (estimated), woollen and worsted	
(iii) (1925-39), using Census data on fibre consumption by wool industry	—0.15	

(4) *Equation of relationship of wool price to wool clothing price*:

Price of wool clothing, per lb. $= s + t$ (price of wool) .. .. .. (4a)

Where s = that part of the cost of transformation independent of the price of wool,

t = pyramiding ratio (i.e. the number of times a given change in wool price is magnified by fixed percentage margins in manufacture and distribution).

From this, t is the derivative of wool clothing price with respect to the price of wool; therefore the corresponding elasticity u is equal to t multiplied by the ratio of the prices.

i.e. $u = t\dfrac{\text{price of wool}}{\text{price of wool clothing}}$ where u = elasticity of wool clothing price with respect to wool price.*

$$= \frac{t \quad \text{(price of wool)}}{s + t \text{ (price of wool)}} \quad \text{.. .. ..

The assumption made that pyramiding and price-lines offset each other implies, as a compromise between these extremes, a pyramiding ratio of unity. Under these conditions the elasticity becomes equal to the ratio of the prices, and the "constant" s in 4b becomes equal to the average transformation cost per lb. of wool.

Thus: $u = \dfrac{\text{price of wool}}{s + \text{price of wool}}$ .. .. (4c)

Results:—

United Kingdom, 1935:	u	= 0.08
Transformation cost, 1935		= 182.5d. lb., clean
Transformation cost, 1938		= 202d. lb., clean (estimated)
United States, 1939:	u	= 0.14
Transformation cost		= 474 cents lb., clean

The explanation and use of these results are as follows. Using average prices of wool consumed in U.K. (1935) and U.S. (1939), percentage ratios of wool price to wool clothing price were worked out at 8 per cent. and 14 per cent., respectively. These ratios were then applied to the standard price series (U.K. average of merino 66's and crossbred 46's, U.S. "average of four grades, Boston") and the transformation costs worked out were appropriate to these. These costs, adjusted to a 1938 basis, were then applied to the 1938 level of the standard price series, to give price ratios appropriate to the 1938 price level, and to various other levels above and below it (see table of results in next section).

(5) *Combination of equations (1), (3) and (4).*

The link between equations (1) and (3) is provided by the fact that, over a period, "quantum of wool clothing purchased" in (1) is directly proportional to "output" in (3), say:

Quantum of wool clothing purchased = y Output.

—so that if we substitute the former in the latter, and also the price of wool in the price of wool clothing, from (4) above, we get:

Log (quantity of wool consumed by manufacturer) = $a + q + b$ log (real national income) + $(cu + r)$ log (price of wool) + d log (index of retail prices other than clothing) − log y .. .. (5)

In this equation a, q and log y are constants.

From this equation we get:—

(i) Income elasticity of demand for wool = b = income elasticity of demand for wool clothing.

Results:—Estimated on the basis of the results of (1) and (2) above, at approximately 1.1, for both the United Kingdom and the United States.

(ii) Price elasticity of demand for wool = $cu + r$ = elasticity of consumers' demand for wool clothing $\times \dfrac{\text{price of wool}}{\text{transformation cost} + \text{price of wool}}$ + elasticity of manufacturers' demand for wool clothing.

Results:—

TABLE V.—COMBINED ESTIMATES OF PRICE ELASTICITY OF DEMAND FOR WOOL

Price of wool, clean basis, per lb.	(1) Elasticity of consumers' demand for wool clothing	(2) Price of wool ÷ (transformation cost + price of wool)	(3) (1) × (2)	(4) Elasticity of manufacturers' demand for wool	(5) (3) + (4)
	e	u	eu	r	$eu + r$
United Kingdom—					
45d.	−1.0	0.18	−0.18	−0.37	−0.55
22d.	−1.0	0.10	−0.10	−0.37	−0.47
18d.*	−1.0	0.08	−0.08	−0.37	−0.45
13½d.	−1.0	0.06	−0.06	−0.37	−0.43
United States—					
120 cents	−1.0	0.20	−0.20	−0.42	−0.62
90 cents	−1.0	0.16	−0.16	−0.42	−0.58
66 cents*	−1.0	0.12	−0.12	−0.42	−0.54
60 cents	−1.0	0.11	−0.11	−0.42	−0.53

* Average 1938 level, U.K. average merino 66's and crossbred 46's, U.S. "average of four grades, Boston".

Note:—These results differ from those given in the writer's note in the *Economic Record* for June, 1949 ("The Demand Equation for a Raw Material in Empirical Studies"). In this an attempt was made to fit non-linear curves to the diagrams depicting manufacturers' demand, a procedure about which second thoughts have now been preferred. A minor error in equation (4) of this note can be corrected here. The constant term aa_1 should have read $a_1 + b_1a$.

MAXIMIZATION AND BUSINESS BEHAVIOUR

The widespread acceptance of aggregative income analysis has enabled economists to avoid many difficult and indeterminate issues. However, the consequent air of greater determinancy surrounding such economic analysis as takes place in aggregative models may well be a pretentious sham. This is especially likely when the assumption of "given changes" in economic variables is constantly made, without any examination of the rationale of such changes.

The theory of economic behaviour has been built, in the main, on the interrelated assumptions of rationality and maximization. But there is considerable disagreement as to what is maximized and as to how such a process of maximization may be represented. It is even more difficult to achieve unanimity on the method of measuring the degree of maximization effected in any specific instance of economic problem-solving behaviour.

The discussion of these questions has been mainly in terms of the individual as a consumer. It has been argued that the problem of measurement is less esoteric for the theory of business or entrepreneurial behaviour than for the theory of individual consumer behaviour. Variations in the level of realized profits are assumed to be a reasonably good approximation to the different degrees of utility, howsoever defined, associated with alternative courses of action. The behaviour pattern which yields maximum profits is also assumed to yield the maximum utility possible, in the given set of conditions, to the individual who determines the behavioural pattern of the particular economic unit under consideration. Thus, as economic rationality implies the attempted maximization of utility, the attempt to maximize profit is alleged to be an objective representation of planned business behaviour.

Therefore, the concept of profit maximization appears as the dominant feature of entrepreneurial motivation, insofar as this latter has appeared, in highly simplified form, in economic analysis. For all its importance, the nature of the concept of profit maximization is highly indeterminate.

The first ambiguity is concerned with the nature of profit. It is a reward for services rendered. But what services, and by whom rendered? Is it a reward for the undertaking of the risk of the loss of capital. Is it the reward for the bearing of uncertainty in the planning of future production and investment? Should profit be regarded as a factor payment to entrepreneurs or to owners (where these categories involve two different sets of individuals) or to both?

It is difficult to generalize on these issues,[1] and the answers to these questions will largely depend on the institutional structure of the economy in general and of the individual firm in particular.[2]

Similar considerations apply to the second area of uncertainty, namely, the question of how profits are maximized. This involves the issue of which profits are relevant in the formation of entrepreneurial decisions. Is it realized profit, expected profit, gross profit, net profit, distributed profit (dividend payments) or undistributed profit? Here, again, the appropriate answer will depend on the institutional characteristics of the particular entity under consideration. If we make the traditional assumption that realized profit is the relevant parameter, it is still necessary to reach agreement on the methods which may be used by an entrepreneur to maximize such profit. Does he apply the "full cost" principle or does he attempt to equate marginal cost and marginal revenue? This brings us to the troubled waters of the marginal cost controversy, and, emulating the behaviour of the aggregative economists, it is proposed to let others dispute this ground.[3]

Even where the foregoing problems are satisfactorily solved it is still necessary to decide on the period of time relevant for the calculation of that category, or combination of categories, of profit assumed to be most important in the formation of a specific entrepreneurial decision. It seems most unrealistic to assume that profit is maximized at every point of time, but even if we recognize the principle of profit being calculated over a period, the relevant period has still to be determined. Here we have a choice amongst the "pay-off" period, the financial period, the planning period and so forth, each of different length and each posing their own special problems.

Finally, the amorphous nature of profit maximization as traditionally conceived is intensified by the unrealistic nature of assumptions about the institutional structure within which entrepreneurial decisions are taken. The hypothesis that profit maximization was a sufficiently close measure of entrepreneurial satisfaction or utility to serve as a criterion of business behaviour is most tenable, in the absence of certainty, where there is no separation of ownership from control and where the difference between total revenue received and

1. It is suggested that any single-factor theory of profit may have to be cast in such general terms as to be meaningless. If such be the case, it is, surely, more sensible to develop a multi-factor theory of profit capable of modification to fit a number of major institutional patterns.

2. E.g. the ownership pattern; the incidence of the entrepreneurial function in the managerial and ownership sectors, respectively; the pattern of financing of investment, etc.

3. Inherent in the marginalist solution are two oversimplifications. Firstly, profit maximization, for the marginalists, is a process of convergence to optimal behaviour by trial and error. This hypothesis depends upon the assumption of perfect knowledge, i.e it excludes consideration of behaviour under uncertainty. Secondly, the static nature of the analysis implies the absence of innovations in technique and products. The restrictive nature of this latter assumption is, however, tempered by the transformation of physical heterogeneity into analytical homogeneity by the conduct of analysis in terms of the numéraire, money.

total costs of production in a given period[4] is identifiable with the reward for the services of a single individual, the entrepreneur. Such an institutional pattern is becoming increasingly rare.[5]

It seems, then, that any explanation of business behaviour, assuming that it is rational and of a maximizing nature, must be given specific content, and therefore meaning, by an enumeration and empirical testing of the parameters and limiting conditions relevant for the determination of a utility level.[6] It is proposed to approach this project through the consideration of a number of institutional forms of the making of entrepreneurial decisions.

II

The first category, represented in its most extreme form by Schumpeter's early formulation of his concept of the entrepreneur, consists of a single individual, exercising ownership, managerial and entrepreneurial functions, bearing in full the uncertainty (as to price, demand, the supply of factors of production, the level of output, finance of investment, etc.) associated with the operation of the firm. In this model, profit maximization may be taken as largely synonymous with utility maximization, so that the entrepreneur's interests as a producer and as a consumer tend to coincide. The proportion of profit "ploughed-back" will depend largely on the relative scales of corporate and personal income tax. It is likely to be substantial if the entrepreneur wishes to expand the scale of operations because of the difficulty of raising sufficient venture capital from outside sources of personal and corporate saving.[7] No conscious policy of dividend stabilization is likely to be adopted, but rather is it probable that dividends will be closely geared to realized profits. Some unconscious element of stability may be imparted by the fact that the need for "ploughed-back" earnings would also tend to vary in the same direction and in much the same degree as realized profits and, probably, vary with the difficulty of attracting sufficient venture capital from outside sources on acceptable terms.

This latter may perhaps be better regarded as a constant, for as realized profits, and therefore the supply of investable funds, increase so do the demands for capital; and the price at which sufficient outside investable funds are available may be so high as to render the expected rate of return on a larger scale of operations unprofitable: when the level of realized profits is declining and the firm's concern

4. After taxation and depreciation allowances are deducted.
5. At least in the sense of the share of aggregate output emanating from such firms.
6. It is, of course, essential to reach agreement on what constitutes a utility level and on the method of approximating to a measure of it. I do not propose to consider this latter question.
7. The difficulty may manifest itself in terms of the expense involved, direct capital rationing by financial institutions, or of unacceptable conditions, relating to the conduct and control of the firm (imposed), by potential lenders.

is the avoidance of loss rather than the making of a higher net rate of return, the aggregate demand for precautionary balances will also increase, and capital rationing will proceed on the basis of the varying degrees of riskiness rather than on the different degrees of expected profitability when realized profits are rising in the economy as a whole. For the small firm, with which this model is primarily concerned, the risk factor is likely to be large because of its greater vulnerability to a smaller absolute loss than the large firm even though it may be more efficient, and, therefore, better able to stand a larger proportionate decline in revenue. This need to offset the larger risk factor, interpreted in the above sense, may be reflected in a demand for a certain measure of control over the undertaking, as well as higher terms of borrowing. Thus, in both cases, where realized profits are increasing and where they are declining, the firm of this model will tend to find venture capital largely unavailable.

An additional element of cyclical instability in this model arises out of the likely absence of any formal decision-making procedure. This would accelerate the process of plan revision; shorten the "pay-off" period, i.e. the period in which profits expected to accrue from a specific investment may be sufficient to recoup the initial capital outlay; and accentuate the uncertainty associated with plan formulation and profit expectations. This administrative flexibility, permitting the possibility of rapid and frequent plan revision, may, however, be held in check by the difficulty of financing the fixed and working capital requirements for a revised plan. Limits to the size of the firm are likely to be set a combination of considerations of administrative efficiency (whilst retaining the principle of effective control by a single individual) and of fear of loss of effective control (i.e. the loss of majority equity through recourse to outside financing).

The second type of institutional framework assumes that management is divorced from ownership. The entrepreneurial function is exercised by two sets of individuals—the managerial section on the one hand, and the Board of Directors, acting as the nominees of the shareholders, on the other. It is further assumed that effective control is exercised on behalf of the shareholders, i.e. managerial interests are subservient to those of ownership.

The motives in such a situation will be highly complex. On the one hand, directors will attempt to ensure the maximum gain to shareholders. This will depend upon the balancing of income gains (dividend distributions) and capital gains.[8] On the other hand, managerial interests will attempt to maximize internal "empire-build-

8. The reinvestment of realized profits leading to asset accumulation may consequently increase the market value of the company's shares if net revenue is increased proportionately more than the increase in capital employed.

ing" policies, e.g. the promotion of managerial power, prestige and salary increases, at the expense of profits if need be. The managerial unit in this model is to be regarded as a potential bottleneck in the implementation of entrepreneurial decisions. A specific function is held to be performed, a fixed indivisible lump of services rendered. The intensity and efficiency with which these services are performed is assumed to be at a maximum regardless of the size of the profits, expected or realized, accruing to the firm itself. At the same time, realized profits will be a significant determinant of entrepreneurial action in two senses. Firstly, as an objective measure, to be applied by the entrepreneurial unit, of the efficiency and success of the managerial unit in implementing decisions reached by the directors; secondly, as a motivation of the managerial group, even if the scale of remuneration is fixed regardless of the size of realized profits. That is, if realized profit is not sufficient to ensure a certain expected return on capital, managerial tenure of office may be precarious. Or, managerial salaries may be geared in some way, automatic or arbitrary, to the level of realized profits.

Where managerial salaries are not linked to realized profit there may be a general reluctance on the part of management to innovate, because of the greater uncertainty engendered with regard to the profit expected to be realized by the firm over the financial priod, with no off-setting reward to management for the bearing of this additional operational uncertainty. There is likely to be a greater emphasis on stabilizing the firm's operations at a level of output, costs of production, selling price and share of the market, sufficient to ensure the continued achievement of a rate of return on capital satisfactory to shareholders and yet at a level which could be expected to be maintained in successive periods.

The linking of managerial remuneration to variations in realized profit renders the position less determinate. The attitude towards innovations may be determined by a process of weighing the marginal utility of an addition to income against the marginal disutility of the additional effort required and the additional uncertainty to be borne. Resistance to change and emphasis on stabilization policies is likely to be weaker than where salaries are not linked to profits. However, it must be considered that social conditioning factors[9] may be more important in determining managerial and entrepreneurial lines of action than the deliberate weighing of marginal utilities and disutilities. That is, emphasis may be placed on the widening of the range of controlled conditions, i.e. reducing uncertainty,[10] rather than

9. E.g. internal "empire-building" and the urge to replace ownership control of the firm by managerial control.

10. Cf. K. J. Arrow: "Alternative Approaches to the Theory of Choice in Risk-Taking Situations". *Econometrica*. Vol. 19 (1951), pp. 404-37.

upon chasing the will-o'-the-wisp of additional money income, especially if penal rates of personal income taxation apply to any additional income received.

Limits to the size of the firm in this model may be influenced by two main factors. Firstly, the necessity to maintain a minimum rate of return on shareholders' capital may be a serious obstacle to large-scale investment unless it is highly probable that the consequent increase in capital value will be matched by a corresponding increase in annual net profit. Secondly, there may not be the same urge as in the first category[11] to build up a large firm because the financial benefits of large-scale operation do not accrue, necessarily or directly, to management; nor, failing monetary reward, is there any guarantee that the existing management will have its social welfare function increased in any other way. It may well be that with the extension of the firm's activity, resulting from large-scale asset accumulation, the existing top-level management may be replaced or down-graded in terms of their relative importance in the managerial hierarchy.[12] This may occur because the ownership unit does not consider the existing personnel capable of handling the enlarged responsibility, even though they may be satisfied with the efficiency displayed at the previous level of the firm's operations.

The third category is concerned with the situation wherein managerial and entrepreneurial functions are exercised by a single group of individuals, separated from the ownership unit and dominating this latter. It is this concept of the corporate entrepreneur which will concern us in the next section.

III

The concept of the corporate entrepreneur has not yet attracted the attention it warrants.[13] With the increasing concentration of industry (in terms of the share of aggregate output), and a widening gap between ownership and entrepreneurial activity,[14] this specific type of institutional arrangement is becoming more and more important in terms of the influence it exerts upon total output, cost conditions, price policies, etc. Ergo, its claim to be regarded as typical of business behaviour is correspondingly more justified.

The first step is to establish criteria of action. As outlined above, profit maximization as it stands appears inadequate and must either be replaced or modified. Assuming the latter course to be more relevant, it then remains to indicate the ways in which the principle may be so

11. One individual exercising ownership, managerial and entrepreneurial functions.
12. cf A. R. Towl: "Patterns of Executive Compensation". *Harvard Business Review*. Vol. 29 (1951), pp. 25-36.
13. See, however, O. Knauth: *Managerial Enterprise* (New York, 1948), and J. H. Strauss: "The Entrepreneur: The Firm". *Journal of Political Economy*, Vol. 52 (1944), pp. 112-27.
14. cf. Burnham's *Managerial Revolution*.

modified that it may serve as an approximately realistic description of the motives underlying business behaviour within a given institutional framework. One plausible hypothesis is that the entrepreneur, i.e. the managerial group, will tend to follow these policies which consolidate and increase its effective control over the firm and over industry generally. To make such a generalization meaningful, it is necessary to elaborate the types of policy which may be most relevant.

Taking profit maximization first, it may be argued that realized profits are the major determinants of investment decisions, working through two main channels. Initially, by providing a reserve of liquid assets, insofar as all realized profits are not distributed, realized profits may be regarded as a precautionary balance offsetting the additional risks incurred through the undertaking of a new investment programme. Additionally, realized profits, again insofar as they remain undistributed, serve as a source of investable funds available to a managerial group which is unable or unwilling to use outside funds.[15]

But it is not only realized profit that is relevant to the formulation of investment decisions. The introduction of the time factor recalls that the making of investment decisions involves the preparation of plans for a future period. This suggests that plan fulfilment is another objective of entrepreneurial activity. However, plan fulfilment may be manifested in a number of ways. It may take the form of the realization of a certain sales target, assuming costs of production and selling prices remain constant, or, rather, that they do not exceed or fall short, respectively, of estimates made at the beginning of the period by the entrepreneur. Such a policy is likely to be pursued if the primary concern of the firm, at least in the short run, i.e. for the planning period under consideration, is to ensure a certain share of the market for that particular firm. Again, using the same assumptions, plan fulfilment may mean the achieving of a certain rate or level of profit. The essential point is that, at the beginning of the planning period, it is expected profit which the entrepreneur is attempting to maximize. Plans may be revised during, or at the end of, the period on the basis of the relation between planned profit, expected to accrue from given technological and cost conditions and certain expected levels of output, sales[16] and selling price, and realized profit which emerges at the end of the period. During the period

15. cf. W. W. Heller: "The Anatomy of Investment Decisions". *Harvard Business Review*. Vol. 29 (1951), pp. 95-103.

16. Both assumptions are necessary in order to neutralize the influence of inventory variations upon entrepreneurial decisions. For a discussion of inventory policy see G. Ackley: "The Multiplier Time Period: Money, Inventories and Flexibility". *American Economic Review*. Vol. 41 (1951), pp. 350-68. K. J. Arrow, T. Harris and J. Marschak: "Optimal Inventory Policy". *Econometrica*. Vol. 19 (1951), pp. 250-72; and E. S. Shaw: "Elements of a Theory of Inventory". *Journal of Political Economy*. Vol. 48 (1940), pp. 465-85.

any one or more of the above conditions may have been modified, though at the outset they are assumed to remain constant[17] throughout the period.

Thus realized profit of period 1 will not necessarily be a major determinant of the plan revision undertaken at the beginning of period 2, particularly if we relax the assumption that technological conditions remain given for successive planning periods.[18] Continuous innovational activity will necessitate the continuous revision of sales targets, selling price and expected costs of production, even within the relatively short duration of a capital budgeting period.[19] Taken collectively, the influence of the revision of these factors, which may be conveniently summed up in terms of changes in profit expectations, seems likely to be at least as significant a determinant of planned business behaviour as the level of profit realized in the previous planning period.

But what is being maximized may be something rather more general than profit, whether expected, realized or a combination of both. One suggestion is that the firm attempts to maximize utility rather than profit.[20] However, the concept of utility is open to all the objections raised earlier in the concept of profit; in addition, it may be queried whether it is meaningful to talk of utility of a certain course of action to a corporate body, such as a firm. One advantage of the new concept is that it draws attention to the fact that business firms, especially those falling into the category of the corporate entrepreneur, are concerned with both the structure of their assets and the size of their profits. That is, they will attempt to strike a balance between the interrelated criteria of asset maximization[21] and profit maximization.

To see the interrelated nature of the two criteria it is necessary to divide realized profit into dividend payments, i.e. realized profits distributed to shareholders, and undistributed profits. It is possible to have quite a wide variety of dividend policies. There may be an automatic declaration of a fixed rate of dividend when shareholders are regarded as residuary risk-bearers, as appears to be the case in the corporate entrepreneur model. Then, dividends become almost the

17. Or, at least, not to vary beyond a certain narrow range, which represents the ex ante degree of flexibility, in non-controlled conditions, acceptable to entrepreneurs.

18. cf. M. Moonitz: "The Risk of Obsolescence and Importance of the Rate of Interest". *Journal of Political Economy.* Vol. 51 (1943), pp. 348-55.

19. The evidence on the prevalence of capital budgeting is not conclusive. It suggests that, although it may not be used in a majority of firms, it tends to be used most frequently in large firms where the gap between ownership and management is widest. The probability of this technique being applied to the major part of aggregate investment is therefore high. cf. Heller, *op. cit.*

20. cf. L. R. Klein: *Economic Fluctuations in the United States,* 1921-41 (New York, 1950), Ch. 2; F. H. Hahn: "The Share of Wages in the National Income". *Oxford Economic Papers,* N.S. Vol. 3 (1951), pp. 147-58; K. E. Boulding: *A Reconstruction of Economics* (New York, 1950), Ch. 6.

21. For a discussion of this process see Arrow, Harris and Marschak, *op. cit.;* and H. Makower and J. Marschak; "Assets, Prices and Monetary Theory". *Economica,* N.S. Vol. 5 (1938), pp. 261-88.

same as interest payments, i.e. a contractual fixed cost, with a given share capital. Alternatively, the pattern of dividend distribution may be determined by fluctuations in realized profit, varying cyclically and thus accentuating the instability of the economy by reinforcing the cyclical fluctuations in other forms of income.

The attitude of the executive group towards dividend distribution will depend upon the relative importance of a number of factors. Firstly, if they, themselves, are large stockholders the balance may be tipped in favour of liberal dividend payments. Secondly, if the firm is at what they consider to be an optimal size, with few opportunities for expansion, they may again pay out almost all the realized profit in dividends, even though their own shareholdings may be negligible. This time the primary concern would be to avoid piling up unwanted assets which would remain partly or completely idle if retained within the firm. In both instances, the maximization of current realized profit is preferred to the maximization of the asset holdings of the firm. Profit maximization is, then, the underlying motivation of the behaviour of these categories of firms.

Thirdly, where the gap between shareholders and the entrepreneurial group is widest, business behaviour may be regulated primarily by a social stimulus which replaces the monetary stimulus embodied in the principle of profit maximization. This social stimulation may be represented by the objective process of asset maximization, i.e. the effect of the stimulus is reflected in the attitude towards dividend policy and thereby in changes in the asset structure of the firm. Where asset maximization is ranked higher than profit maximization as a criterion for entrepreneurial action, the tendency will be to restrict dividend payments as far as is possible in order to maximize undistributed profits, i.e. the firm's "own funds".[22]

A dividend policy weighted in favour of asset accumulation, largely through the use of undistributed profits, may be forced on firms by exogenous factors as well as being an expression of the preferences of the entrepreneurial group. One of these non-controlled conditions may be the absence of a continuous and adequate supply of venture capital from outside sources on terms acceptable to the firm. Another exogenous factor may be the necessity to maintain real capital in the face of a cyclically or secularly rising general price level in order to preserve the organization intact in terms, e.g. of its share of the market. Where the replacement cost of capital equipment is being constantly increased vis-a-vis original cost, it may be essential to make a provision for replacement cost, over and above conventional

22. See W. F. Butler and R. F. Ulin: "Business Needs for Venture Capital," *Harvard Business Review*, Vol. 24 (1950), pp. 52-65, for a discussion of the sources of venture capital and some of the reasons underlying the trend towards self-financing of investment. Also, cf. Heller, op. cit.

depreciation allowances, a first charge on surplus earnings in order to at least maintain fixed and floating assets, in real terms.

The principle of the maximization of undistributed profits, as applied in the corporate entrepreneur model, implies further modifications to the theory of business behaviour developed on the assumption of the maximization of realized profit. The maximization of utility, in the absence of a more satisfactory concept, for the corporate entrepreneur does not necessarily depend upon the prior maximization of realized profit. Where the corporate entrepreneur is concerned with the continuity of the existence and operation of the firm, together with a continuous process of self-financed asset accumulation, emphasis will be placed on the maximization of undistributed profit. The maximization of total profit will be a pre-requisite only where it is also necessary to maximize dividend payments. This necessity will arise only if the shareholders are able to exert an effective control over the decision making, or entrepreneurial, group. However, in the corporate entrepreneur model, it appears reasonable to assume that shareholders' influence is negligible and that they are more likely to be cast for the role of residuary risk bearers.

Then, the maximization of undistributed profits may be achieved, without the prior maximization of realised profit, by altering the rate of dividend distributions. The prevalence of such a practice will depend, in the main, upon the degree to which, in the empirical situation facing the entrepreneur, non-controlled conditions are relatively more important than controlled conditions. This is determined by a number of factors.

Firstly, it will depend upon the difficultiy of the firm altering, by its own actions, market conditions or technological conditions. Secondly, the extent of the firm's reliance upon, or independence of, the capital market and financial institutions for investible funds will be significant. Where a considerable portion of the funds necessary for an investment programme are provided by reinvested or "ploughed-back" earnings, the corporate entrepreneur will have greater freedom to vary the size of dividend payments. Thirdly, even if shareholders are able to exert an appreciable influence, maximum undistributed profits, for a given size of the firm, may still be associated with less than maximum realized profits, for a given period, if shareholders are willing to forego a certain income gain now, i.e. accept lower dividend payments, in the hope of getting a less than certain capital gain in the future. A capital gain will occur where the market value of shareholdings increases as a result of the process of asset accumulation. The shareholders' attitude towards such a proposal may depend largely on the degree to which the tax structure penalizes income gains relative to capital gains.

The growth of self-financing of investment may enable new firms to obtain their requirements of venture capital on more advantageous terms than would otherwise be possible, due to the reduced demand for investible funds from outside sources by established firms. This easing of pressure will depend upon whether the increase in aggregate demand for venture capital from sources outside the firm is growing at a slower rate than the aggregate supply of personal saving available for venture capital requirements,[23] and aggregate corporate saving.

A more likely assumption is that the process of the concentration of industry into fewer hands will be accelerated. This does not mean the disappearance of innovations. It may, however, mean the ossification of the institutional structure and effectively block the rise of any major new firm, financed and controlled by groups independent of those already operating in the business world. Concomitantly, the increasing formalization of the decision-making process that will tend to accompany the widening of the gap between ownership and control will give rise to a greater stability of entrepreneurial behaviour and the reduction of uncertainty, because of the increased difficulty of rapid plan revision.

IV

It is now possible to reach some very tentative conclusions as to the maximizing nature of business behaviour. It is apparent that any single-factor theory requires a highly restrictive set of assumptions. But, profit maximization, as such, is not sufficiently precise. Non-monetary considerations may be the dominant motives in certain institutional patterns. Profit maximization may take many forms, the choice among the alternative concepts being dictated by the nature of the institutional assumptions made. For the category 1 model, the maximization of total realized profits is most relevant; for category 2, the maximization of dividend payments; for the corporate entrepreneur model, the maximization of undistributed profits. These three are concerned with ex-post explanations of business behaviour in past periods. Where we are concerned to explain the motives underlying entrepreneurial plans for future periods, it is necessary to use the appropriate ex-ante, expected or attempted versions of the above concepts.

Finally, the only way that agreement can be reached in this matter is by means of sufficiently comprehensive empirical surveys. The empirical material as yet available is suggestive rather than conclusive.

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23. Cf. Butler and Ulin, op. cit., for evidence of the declining availability of personal saving for this purpose.

LABOUR TURNOVER IN BUTTER FACTORIES IN NEW ZEALAND*

I. Introduction.
II. Definitions and Scope of Investigation.
III. Analysis of Data.
IV. Other Factors Relevant to Labour Turnover.
V. Limitations of Functions.
VI. Summary and Conclusions.

I

It is intended in this article to survey briefly labour turnover in New Zealand butter factories for a given period, the 1949-50 season. The main object is to test for causal relations between labour turnover and

(1) Size of factories,
(2) Housing accommodation provided for employees,
(3) Average gross earnings,
(4) Location factors and competition for labour by other industries.

Butter factories have been selected partly because of the importance of dairying industry in the New Zealand economy, and partly because the homogeneous character of the product and processing in the individual manufacturing unit permits valid comparison. The 1949-50 season was one of relative industrial stability as far as industrial relations go, and is considered a suitable normal period for examination.[1]

It may be objected that butter manufacture is a seasonal occupation. It is true that it is classified in this manner in New Zealand official statistics and by the Department of Labour and Employment, perhaps regrettably so, for a seasonal industry (so-called) is handicapped in recruiting and retaining labour when competing against permanent employment industries. In the *New Zealand Official Year Book* it is stated: "It should be observed that seasonal factory industries—i.e. meat processing, etc., fruit and vegetable preserving, and dairy products manufacture . . . are included separately in the seasonal group".[2] It is also true that cheese manufacture is seasonal in character, but this does not apply to butter manufacture, where 99 per cent. of the factories endeavour to retain their staff on a permanent basis, as the following table indicates.

* I am indebted to Professor C. G. F. Simkin and Dr. E. P. Neale for reading an early draft of this article and making valuable comments on it.

1. Labour turnover contracts in times of depression and expands in times of prosperity.
2. *New Zealand Official Year Book*, 1947-49, p. 713.

TABLE I.

Index numbers of seasonal employment in dairying factories (butter and cheese). 1949-50 season, for the five largest employing districts in New Zealand.[3] *(Base: One season.)*

	Butter					Cheese				
	Auck.[4]	Ham.	N.P	P. Nth.	I'gill.	Auck.	Ham.	N.P.	P. Nth.	I'gill.
Jul.	84	88	84	92	100	75	59	55	53	69
Aug.	99	96	94	97	100	89	63	77	78	—
Sep.	112	109	108	97	100	127	110	110	105	64
Oct.	113	112	109	102	100	136	142	124	131	98
Nov.	116	114	109	107	100	134	132	131	135	112
Dec.	117	116	110	107	100	136	136	129	139	112
Jan.	110	114	109	103	100	130	116	123	127	123
Feb.	98	101	106	101	100	96	99	114	113	120
Mar.	92	100	102	100	100	82	101	106	102	113
Apr.	91	93	96	100	100	68	97	96	90	107
May	88	82	89	100	100	61	84	76	76	101
June	82	78	84	94	100	68	60	58	51	79

The five employment districts in the above table account for 60 per cent. of dairy factory employment in New Zealand.

Note—

(a) Dual plant factories, or units manufacturing other products, casein, milk powders, have been excluded in the above figures.

(b) In the month of August the cheese factories in the Invercargill Employment District close down.

(c) Employment includes juveniles, women and other part-time employees.

(d) In each case the district named is an area described as an "Employment District" and is not co-terminous with a provincial or other district.

(e) The range of the index numbers in the butter group is considerable as it includes such workers as lorry-drivers engaged in cream collection. Whilst a large percentage of cream is collected on a contract basis, many companies must include this type of employee (who is probably the most unstable from the point of view of seasonal employment) in their returns. Had lorry-drivers been excluded, the seasonal character of employment would have been much less. On the other hand, in the cheese industry, farmers generally deliver their own milk

3. Source: Extracted from monthly returns of Employment in Seasonal Industries returned to Department of Labour and Employment.

4. The abbreviations stand for: Auckland, Hamilton, New Plymouth, Palmerston North, Invercargill.

to the factory, thus precluding the need of engaging transport workers.

II

Definitions.—Factories: Factories producing creamery butter. The survey includes dual plants (butter and cheese or butter and casein, etc.), but where dual plants are incorporated, due care was taken to extract figures which applied to the butter departments only.

Employees: Includes managers, female employees and youths. The term *employees,* however, excludes lorry drivers, clerical workers, workers in casein plants and buttermilk drying plants and all other subsidiary activities, such as storekeeping, which usually are operated as supplementary or complementary activities of the factory concerned. Only wages or salaries properly chargeable to *Manufacturing Wages*[5] were included.

The number of employees per factory was taken as that standard figure described as the complement or establishment of the factory during the flush of the season. November was the month taken to represent the flush of the season.

Replacements: The number of new employees or accessions engaged during the season who worked for a period longer than one week.[6]

$$\textit{Labour Turnover}: \frac{\text{Total Replacements}}{\text{Total Employees}} \times \frac{100}{1}$$

Scope of the Survey: Observations were made in 90 butter factories out of the total of 114 operating in New Zealand. These were selected to cover all New Zealand territorially, as well as to include all types of factories with varying outputs. The percentage of total New Zealand creamery butter output represented is 87 per cent.

The following figures will indicate the extent of the survey, and will summarize it:

Total employees in *all* types of dairy factories engaged in all types of work, including administration, cartage, stores and all subsidiaries, for the season	5,005
Total employees in the above survey	1,110
Employees excluding managers	1,010

5. Manufacturing Wages have been defined as "Wages, which shall include all emoluments connected with the manufacturing, packing and despatching of the produce . . . other than those applicable to cream collection, repairs or administration. . . ." The Dairy Industry Accounts Regulations (1950-1), p. 8, para. 12.

6. It is important to recognize that a given labour turnover rate of 100 per cent. per annum may have arisen from every employee being replaced during the period under survey, or from 10 per cent. of dissatisfied workers being computed as the same number of separations or accessions due to their being "turned over" 10 times in the period. A large number of casuals "float" into and out of the industry, and, in order to remove this inflating factor, an employee has been reckoned as one who worked for a period longer than one week. If labour turnover is to be used precisely, figures are required showing what percentage of the working force remained on the job for the season, as well as a ratio of accessions or replacements.

Houses available 529
Houses available excluding managers' houses 439
Total replacements of labour 649
Labour turnover (inclusive of manager) .. 58 per cent.
Labour turnover (exclusive of managers) .. 64 per cent.
Houses available per employee .. .. 48.5 per cent.
Houses available per employee (excluding manager's house, which *must* be made available by the company) 40.3 per cent.

III

The data (which were obtained by direct personal approach to factory managers and checked from information made available by the New Zealand Dairy Board) are presented in Table II in a summarized form.

TABLE II

Labour turnover of ninety butter factories classified according to annual output of butter in pounds, total employees, total replacements, accommodation units, and average annual wage paid to employees.

Size of Factory (Output of butter in lbs.) (1)	No. of Factories (2)	Total Employees (3)	Total Replacements (4)	Accommodation Units* (5)	Percentage of Employees provided with Accommodation (6)	Average annual wage paid per Employee (7)	Labour Turnover per cent. (8)
Up to 1,000,000 ..	24	101	21	52	53	460	21
1,000,001– 2,000,000	18	156	45	89	57	379	29
2,000,001– 4,000,000	21	238	111	129	54	511	47
4,000,001– 6,000,000	11	197	139	67	34	487	71
6,000,001– 8,000,000	7	173	81	72	42	455	47
8,000,001–10,000,000	3	76	79	27	36	497	104
10,000,001–12,000,000	2	40	40	17	42	609	100
Over 12,000,000 ..	4	129	133	76	51	527	103

* Accommodation units (Column 5) consist of 95 per cent. of houses, the balance being "cottages", flats, "baches", huts and hostels, which have been converted into units of accommodation on the basis of the average depreciated value of houses as disclosed in the annual accounts of the companies concerned.

Multiple correlation analysis: The same data were subjected to multiple linear correlation analysis. As there were no definite curvilinear characteristics when plotted separately in scatter diagrams, the data were computed by linear methods.

The four factors studied were given the following symbols:—

X_1 = Labour turnover (the dependent variable).
X_2 = Accommodation ratio.
X_3 = Output (in pounds of butter).
X_4 = Average annual gross wage per employee.

The various coefficients and measures are as follows:—

Simple Correlation Coefficients	Partial Correlation Coefficients	Beta Coefficients
$r_{12} = -0{\cdot}326$	$r_{13\cdot4} = +0{\cdot}537$	
$r_{13} = +0{\cdot}535$	$r_{12\cdot4} = -0{\cdot}404$	
$r_{14} = +0{\cdot}134$	$r_{12\cdot3} = -0{\cdot}563$	
$r_{23} = -0{\cdot}298$	$r_{12\cdot34} = -0{\cdot}2400$	$12{\cdot}34 = -0{\cdot}3233$
$r_{24} = +0{\cdot}272$	$r_{13\cdot24} = +0{\cdot}4453$	$13{\cdot}24 = +0{\cdot}4378$
$r_{34} = +0{\cdot}151$	$r_{14\cdot23} = +0{\cdot}1327$	$14{\cdot}23 = +0{\cdot}4749$

The measures of determination are as follows:—

Factor	Partial Determination per cent.*	Separate Determination per cent.
Accommodation	5·76	7·38
Output	19·83	23·86
Wages	1·76	1·68
	27·35	32·92

* Coefficient of Partial Correlation as percentage of unexplained determination before accommodation, etc., was included in the problem.

The multiple correlation coefficient is:—

$$R_{1\cdot234} = +0{\cdot}5739 \mp 0{\cdot}035$$

When corrected for size of sample, this coefficient was computed to be $+0{\cdot}5534 \mp 0{\cdot}035$. The absolute minimum multiple correlation (with 95 per cent. probability) is $+0{\cdot}4250$. When tested, these results proved to be highly significant.

The multiple regression is:—

$$X_1 = 14{\cdot}03 - 0{\cdot}33166X_2 + 0{\cdot}56846X_3 + 0{\cdot}05960X_4$$

$$S_{1\cdot234} = 35{\cdot}6.$$

When X_2, X_3 and X_4 are substituted by known quantities, labour turnover can be calculated. An illustration will serve.

Assume factory M. has an output of 6,000,000 lbs. of butter per annum, an establishment of 30 hands, of whom 10 are provided with houses, and an annual gross wage-bill of £13,500. Then the accommodation ratio will be 33, the output in hundreds of thousands of lbs. 60, and the average gross wage 450. Substitute for X_2, X_3 and X_4 in the formula,

$$X_1 = 14{\cdot}30 - 0{\cdot}33166X_2 + 0{\cdot}56846X_3 + 0{\cdot}05960X_4.$$

Then—

$$\begin{aligned} X_1 &= 14{\cdot}03 - (33)\,(\cdot33166) + (60)\,(\cdot56846) + (450)\,(\cdot0596) \\ &= 14{\cdot}03 - 10{\cdot}94 + 34{\cdot}11 + 26{\cdot}82. \\ &= 74{\cdot}96. \end{aligned}$$

That is, labour turnover is $74{\cdot}96 \mp 35{\cdot}6$.

There are, therefore, 68 chances out of 100 that factory M's labour turnover will be from 39·3 to 110·5. But this relatively high standard

error of estimate measures the deviations of individual factories from their own appropriate estimated X_1 evaluation. These deviations are caused by a number of factors, two of which (location and competition) are examined in Section V. The balance of the factors causing individual deviations possibly reflect managerial efficiency in promoting (or failing to promote) happy industrial relationships. Thus, provided the sociological and psychological prepensities of employees are not abnormal, nor employer-employee relationships (location and competitive factors assumed normal also), then there are 68 chances out of 100 that the labour turnover of factory M. will be very close to the 75 evaluation.

The Constant Factor: In the above regression, the constant 14·03 can be interpreted as a measure of wastage of labour in the industry, such wastage being unavoidable separations owing to retirements, deaths, transfers, etc. This figure remains constant under normal conditions and will not vary in the short-run.

Accommodation: The accommodation coefficient (X_2) is negative because the higher the percentage of employees provided with suitable housing, the lower will be the labour turnover, and vice versa. This is borne out by an examination of columns (6) and (8) of Table II, which indicate that labour turnover varies inversely with accommodation made available.

But Table II does not reveal the extent of the relationship between these two variables, as very small factories tend to supply very full accommodation for their employees. Of twelve factories which supplied 100 per cent. accommodation, ten are found in the first-class frequency. Moreover, when labour turnover was classified according to the percentage of employees provided with accommodation, it was found that in fourteen factories, where less than 20 per cent. of the employees were provided with accommodation, the labour turnover was 89 per cent. Again, in eighteen factories where over 80 per cent. of the employees were so provided, the corresponding labour turnover was 35 per cent.

From the measures of determination given in the regressional analysis, accommodation accounts for 5.76 per cent. of labour turnover. Whilst this figure appears low, it must be remembered that it is over 20 per cent. of the total determination given. It would appear, therefore, that labour turnover could be reduced to some extent by increasing housing facilities—a policy which most companies have realized.

Output: Of the other measures of determination, the output or scale of the individual manufacturing unit is the most important, accounting for almost 20 per cent. of labour turnover. This is seen in Table II from a comparison of columns (1) and (8), and also in the coefficients of simple and partial correlation. There were thirteen

factories in the first-class interval of twenty-four that reported no labour replacements, whereas eight of the twenty largest factories reported a turnover of more than 100 per cent.

Wages: Although the measure of determination for average annual wage is only 1·76 per cent., it would appear from the partial correlation coefficients, as well as from the beta coefficients, that the average wage paid has a distinct effect upon the other independent factors, especially accommodation. This relationship cannot be seen in Table II, but a separate analysis reveals the tendency for labour turnover to increase as average annual wage increases. This is illustrated below:—

Average annual wage paid per employee	No. of factories	Labour turnover per cent.
Under £400	13	29
£401-£450	19	38
£451-£500	22	72
£501-£550	14	70
£551-£600	13	71
Over £600	9	76

Variations in annual wages paid depend upon a number of factors, which are difficult to ascertain with any degree of precision. Two important elements are:—

(a) Extent of overtime permitted—which in turn usually indicates a staff shortage or the policy of working below the establishment commensurate with the output of the factory.

(b) The extent of "penal" wage rates—those rates over and above overtime rates for time worked on Sundays, statutory holidays, etc. Certain factories minimize penal rates by working a five-day week and/or closing down on Sundays.

The range of annual wage rates depends largely upon these two factors. Some employees prefer considerable overtime, some Sunday work; whereas others indicate a definite dislike of either or both, having submitted overtime and Sunday work as reasons for their leaving the dairying industry. These subjective preferences reflect social and psychological phenomena which can be traced to marital status, number of dependent children, preference for leisure and sporting activities, desire to improve position or change vocation.

Other elements which cause variation in average annual wage rates from factory to factory are:—

(a) Number of youths and women employed.

(b) The time-lag between separations and accessions—some managers report up to two months before replacements can be effected.

(c) Hands laid off in winter months (not practised today to any extent).

(d) The composition of the personnel—number of senior positions and qualified or certified employees.

(e) Extent to which it is the policy of the company to pay bonuses and wages in excess of award rates.

The above figures are interesting in that the low turnover of the low income brackets possibly suggests immobility of labour rather than job satisfaction. The higher the wage received, the more economically independent the worker becomes, and the more mobile, so that he is prepared to seek an even higher remuneration or work of a different social level.

V

Other economic factors are elements in labour turnover. Two of the more important can be named as the location factor and the competitive factor.

Location Factor: The function of the proximity (or otherwise) of the factory to dense centres of population. The location factor affects and is affected by the accommodation function, and also the competitive function.

To examine the effect of density of population upon labour turnover, the location of factories was classified into five groups.

Group A: Factories within access of a city over 50,000 population.

Group B: Factories within access of a town or city of 10,000-50,000 population.

Group C: Factories within access of a town of 2,000-10,000 population.

Group D: Factories within access of a township of 500-2,000 population.

Group E: Factories in rural areas.

"Access" means within three miles of the population area.

TABLE III

Ninety factories classified according to location and accommodation function and labour turnover.

Location Classification	No. of Factories	No. of Employees	No. of Replacements	Accommodation Units	Labour Turnover	Ratio of Accommodation of Employees
A	2	43	68	7	158	16
B	7	83	69	40	83	48
C	16	260	192	88	74	34
D	27	364	169	171	47	47
E	38	360	151	223	42	62

Labour turnover tends to decrease as factories move from areas of dense population to rural areas. But this can be attributed in part to the fact that accommodation ratio falls from areas of dense population to the country districts.

Several reasons may be offered for this:—

1. City labour seeking employment in city factories is already housed.
2. Higher building or acquisition costs in cities is a deterrent to building or providing accommodation.
3. Realization that to attract labour in rural areas accommodation *must* be provided.

Competitive Function: By this term is meant the competition for labour by other classes of factories. In the butter industry, the main types of labour seeking employment are factory managers, skilled certificated assistants (such as butter-makers, testers, graders, etc.), general hands, lorry-drivers and engineers or boilermen.

Factory managers and their senior assistants are moderately substitutable in other types of dairy factories when viewed as labour factors. The labour turnover of this class of employee is relatively very low, being in the vicinity of 8 per cent., and derives from promotions, transfers, retirements and dissatisfaction. Promotions, transfers and retirements account for almost all of the turnover of managers, but dissatisfaction accounts for about 10 per cent. of termination of first assistants. The competitive function for this class of employee is therefore almost negligible.

There is, however, considerable competition for general hands of the unskilled labour class, and also for those employees who work as boilermen, engineers, fitters, mechanics and lorry drivers. As an economic factor these employees are highly substitutable as labour units.

Competition for butter factory employees has been classified broadly into three main categories:

Class X: Areas of intense competition for labour—marked by competition from other industries such as the coal mining industry, meat packing or processing, and food canning industries.

Class Y: Areas of moderate competition for labour—marked by competition from cheese and other dairy processing factories and others.

Class Z: Areas of little competition for factory labour.

TABLE IV

Ninety factories classified according to intensity of competition for labour and labour turnover

Classification of factory	No. of factories	Total Employees	No. of Replacements	Labour Turnover
X	12	227	264	116
Y	19	256	149	58
Z	59	617	236	38

It will be seen that competition for employees is a considerable factor in that, *ceteris paribus*, turnover increases with competition for labour.

One other factor which may be important, but was not included in the correlation analysis, is the spread of the working week. On account of the highly perishable nature of cream, it is necessary to make butter several days in the week during the season. A few factories work a strict five-day week,[7] and one or two smaller factories have gone so far as to close down on Sundays, even in the flush of the season. The reason for this is partly to stabilize labour and partly to reduce unit costs of production.

Whilst the sample of five factories is too small to be significant statistically, it is interesting to note that these five factories which adhere to a strict five-day week (with an average of 3,000,000 pounds of butter output per annum), have an average labour turnover which is 35 per cent. of that of all factories of a similar size.

VI

There are certain serious limitations in a study of this character. In the first place, many factors are non-economic, whilst those that are economic often have a sociological and psychological complexion which renders analysis difficult.

In the second place, any study of labour turnover is liable to become the statistical counterpart of a study of job satisfaction. To measure labour turnover is to evaluate job satisfaction, and to evaluate job satisfaction it is necessary to probe into the causation of vocational maladjustments, disentangling the economic from the socio-psychological elements. But vocational maladjustment, in turn, is a reflection of emotional maladjustment arising more often than not from emotional maldevelopments. These maldevelopments may or may not be the outcome of intellectual deficiency, of technical incompetency,

7. Five factories were surveyed where employees, whilst processing cream seven days a week, strictly adhere to a five-day working week, Saturday and Sunday work being allocated on a pro-rata basis.

of environmental circumstances, of social status, of employer-employee relationships, of temperamental instability, and of many other causes too—but the fact remains that maldevelopments, maladjustments and general attitude to work of any kind become a complex of causation of job dissatisfaction.

In the third place, given the complexity of elements of economic causation of labour turnover, it must be borne in mind that any measure of turnover will fluctuate, not only from year to year and from month to month, but within the factory itself. Considerable care needs to be exercised therefore in making comparisons, as any measure of turnover will fluctuate with factors such as degree of prosperity of the country, of general industrial or political change or unrest. Thus any statistical measures have a limited value and need to be treated carefully.

In the fourth place, limitations arise from heterogeneity of the factors considered and the reliability of the primary data. The term "employees" has been considered as a homogeneous concept for statistical manipulation, whereas the whole gamut of personnel were included as substitutable units. Thus a youth has been given equal weight to a factory manager and so on. Moreover, in spite of standardized accounts being the basis of much of the primary data, personal investigation revealed that not all factories are interpreting the allocation of wages identically, and adjustments had to be made.

Finally, it is recognised that there are many other causes of labour turnover which have been impossible to incorporate in an objective approach to the problem. Some of these are named.

(a) Wastage due to retirements, illness, death.
(b) Promotions, transfers and dismissals.
(c) Subjective factors—dislike of work, locality, discipline, management, social status, lack of self-esteem, contagious discontent, monotony, occupational maladjustment, age and marital status, and occupational hazards and health.
(d) Objective factors—wage differentials, economic insecurity, recreation and leisure occupational facilities and labour representation.

VII

Conclusions: There is a distinct functional relationship between labour turnover and the variables examined.

The objective factors which tend to intensify labour turnover are:—

(1) Size of factory.
(2) Lack of accommodation for employees.

(3) Extent of competition for labour by other or similar industries.
(4) Proximity of the factory to dense areas of population.
(5) Departure from the 40-hour week principle and excessive overtime.

From the multiple regressional analysis certain points can be established:—

(1) The correlation of salary fluctuations with turnover is slight.
(2) The two significant economic factors in the multiple correlation coefficient are accommodation and size of factory.
(3) Approximately one-third of turnover can be attributed to these factors, the residual being a complex of sociological and psychological causes.
(4) The regressional formula can be utilized by management to determine the extent of extra-economic causation of turnover. The high standard error of estimate which reflects the individual deviations from the regression is probably the outcome of employer-employee relationships conditioned by other non-economic factors.

Labour turnover, as well as these employer-employee relationships, could possibly be reduced by remedial measures suggested by the factors indicated in this study, and also by attention at the managerial and national levels to the following:—

(a) Reduction of economic instability by implementation of a superannuation scheme for the industry.
(b) Systematic grading of all levels of work, especially in the unskilled ranks, with suitable increments, after evidence of satisfactory service at suitable intervals, as an incentive to unskilled workers to remain in the industry over the critical early period of employment.
(c) Greater wage differentials between skilled and unskilled ranks.
(d) Organized detailed dissemination at frequent intervals of all vacancies occurring in the industry.

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GOODWILL AND THE NORMAL COST THEORY OF PRICE

It is proposed in this article to set out the fundamental logical basis of the normal cost theory of price, with particular reference to the demand side of the picture. By the "normal cost theory", we refer to the theory of price determination of Mr. P. W. S. Andrews.[1] Mr. Andrews's theory is *not* to be confused with the so-called "full cost" theory associated with the work of Messrs. Hall and Hitch; though the tendency to so confuse the two is widespread. That tendency is epitomised in Mr. P. Wiles's abortive attempt to reconcile the "full cost" and "marginal" theories;[2] but whatever may be true of the full cost theory, it will be argued that it is not possible simply to reconcile the normal cost and marginal analyses, which differ fundamentally in basic presupposition.

The normal cost theory is concerned in the main—as evidenced by the title of reference (*)—with the determination of prices and production in *manufacturing* industry. However, insofar as manufactured goods are, in general, sold to the final consumer via wholesale and/or retail traders, it becomes necessary to advert also to commercial business. Hence reference (§). But there—at least, so far as the theory has been developed to date—its applicability stops: in particular, the normal cost theory is not relevant to the analysis of prices and output in agricultural industry, or rather, primary industry generally. That is of fundamental significance.

To bring out the essential role of the goodwill factor in the normal cost theory, it will be necessary to contrast it with the perfect (or pure) competition theory, on the one hand, and the theory of imperfect (or monopolistic) competition, on the other. Before we proceed therefore, we must set out briefly the essential content of the latter theories:—

The "pure competition" model envisages (1) a physically standardised product (including associated services); (2) a market condition such that the demand of every buyer is, potentially, available to each and every firm in the industry, and, conversely, the product of each and every firm is available to all would-be buyers; (3) many producers, all small relative to the total output of the industry; (4) a high degree of knowledge of all opportunities; this, in part, is a

1. The theory is formulated in the following works by Mr. Andrews: **Manufacturing Business.* (Macmillan, London), 1949. †"A Reconsideration of the Theory of the Individual Business". *Oxf. Econ. Papers.* Vol. I, No. 1, Jan., 1949, pp. 54-89. (This article preceded the publication of *.) ‡"Industrial Analysis in Economics". An essay constituting Ch. IV of T. Wilson and P. W. S. Andrews (Eds.). *Oxf. Studies in the Price Mechanism.* 1951. §"Some Aspects of Competition in Retail Trade". *Oxf. Econ. Papers.* Vol. II, No. 2, June, 1950, pp. 137-175. NOTE.—For brevity in the following, we shall refer to these works as Andrews.*† p . . . and so on.

2. P. Wiles: "Marginal Analysis and Empirical Research", *Econ. Journal,* September, 1950.

pre-condition of (2); and (5) free entry of firms into the industry. These conditions are sufficient to deduce: that no single producer can influence the general price (since if he raised his own price, he would sell nothing—conditions (1), (2) and (4)—and if he lowered his price, his total capacity being so small relative to the total production of the group—condition (3)—this would not affect the other producers, who would have no incentive to follow him); that each producer, therefore, accepts the price as *given* to him (or if the industry is not yet in equilibrium, forms his expectation of the price in the knowledge that his own actions will not change it from what it would otherwise be), and produces the optimum output—in the long run, extending his plant if necessary—consistent with the price; and that (therefore) each producer proceeds *without regard to holding his own against the other producers* (competitors!), since each can sell all he wants to at the current price, and *without regard to the possible effects of his actions on the appearance of new producers,* for these are bound to appear in any case (conditions (4) and (5).) It is apparent from these conclusions, that the term "pure competition" comes very close to being a misnomer, since competition in any real sense is conspicuously absent.

It is important to observe that the conditions (1) and (2) *taken together* (and with the appropriate assumption—from (4) as to a sufficient knowledge of opportunities, added) add up to the assumption of an *economically* homogeneous product;[3] indeed the latter assumption is, in effect, no more than a short-cut expression for the former conditions taken together. The assumption implies that in the continuing economic process, *the individual producers have a perfectly random relation to the custom of the market.* That is of fundamental significance. In our analysis of manufacturing industry, we shall postulate a product, produced by a number of independent producers, which is standardised in all relevant empirical respects. That is one assumption; but it is of the essence of the normal cost theory that the market conditions for the product of the industry *are a matter for further assumption.* The latter in the case of the "pure competition" model, is the present condition (2) (with the appropriate assumption from (4)); but it is something very different in the case of the normal cost theory (and indeed, Marshall's industrial theory).

The development of the theory of imperfect competition followed upon the recognition of the fact that it was not true, in general, that the individual producer had a random relation to the custom of the market. The "polypoly" analysis[4] should be interpreted as an attempt *to preserve the particular equilibrium analysis in terms of the "industry",* while taking account of the fact that each producer sells to his own (separable) particular market. It sought to retain, in particular, the threefold advantage of the "industry" concept, indicated by R. Triffin.[5]

The important point for our purposes, is that the individual firm's particular demand curve, dd′, drawn through the prevailing

3. See R. Triffin: *Monopolistic Competition and General Equilibrium Theory,* Ch. II, pp. 90-95, and p. 103 ff.

4. The "large group" case of Chamberlin, *Theory of Monop. Comp.* (1st edn.), pp. 56-70, and pp. 81-113; and the (imperfect) competitive equilibrium of Mrs. Robinson, *Ecs. of Imp. Comp.,* pp. 17, 85-101.

5. *Op. Cit.,* pp. 79-80. The analysis led to the famous "tangency" solution for Chamberlin's "particular firm" (*Theory* . . . , p. 111).

price, depicts a range of alternative price and demand-quantity combinations *permanently* open to the producer, the prices of his competitors remaining constant. The last phrase should not be misunderstood: i.e. it must not be taken to imply that, while it is true the dd′ curve exists *if* the prices of competitors remain constant, nevertheless these will *not*. The dd′ curve of Chamberlin's initial situation moves because of the particularising assumption of his process analysis, that there is initially an equal and simultaneous disequilibrium of all firms;[6] it does not move because of any action of the competitors in response to the policy of one firm. Such reactions are ruled out by the assumption of large numbers and the notion of impact effects of price changes by one firm being spread over all firms. The present discussion then is best related to the "tangency" equilibrium situation. Then the *stable* character of the dd′ curve for any one firm is apparent. The firm can charge any price (and produce the corresponding output) shown by dd′, and can *continue* to do so.[7] The curve dd′ is, in fact, a small-scale replica of the stable market demand curve, which is the basic enabling assumption of the particular equilibrium approach. The latter is drawn up on the assumption that the (market) prices of all other commodities remain constant. The dd′ curve likewise, is drawn on the condition that the prices of all other producers in the group remain constant.

Now the isolation of the stable market curve involves an implicit assumption as to the existence of some sort of gap in the chain of substitutes as between the commodity in question and all other commodities. The postulate of the stable dd′ curve *implies the same thing*—as between the one producer's "product" and all other "products" in the group. To preserve the logic of the group, defined with respect to *products*, and involving similar costs of production of the various producers, the situation was argued to in terms of a structure of consumers' preferences derived from presuppositions as to consumer ignorance and a sentimentalised goodwill, in relation to trade marks, brands, etc., popularised by advertising.[8] Preferences so based, that is to say, were assumed to create gaps in the chain of substitutes for any one consumer, and so for all, analogous to the gap implicit in the isolation of the stable market curve.[9] The factors referred to

6. *Theory* . . ., pp. 92-93.

7. In fact, of course, it will charge the price AR (of Chamberlin's familiar diagram) and produce the output OA, since profits will thereby be maximized.

8. Cf. Chamberlin: *Theory* . . ., p. 83 (first para.).

9. The *stability* of the dd′ curve is best illustrated in terms of the spatial model, so prominent in discussions of monopolistic competition. Cf., in particular, Chamberlin: "Monopolistic Competition Revisited", *Economica*, November, 1951, pp. 346-7—subsequently cited M.C.R. A simplified version might be formulated (following Hotelling, *E.J.*, 1929) by conceiving of the (industrial) market as made up of consumers spaced continuously along an infinite line, or, more simply, the circumference of a circle. There are a number of firms, each producing the same (physical) product; the firms are situated at equal intervals along the circumference. Further, there are transport costs for the commodity, the same per unit distance everywhere on the line: and these must be found by the consumer. For any one consumer then, there is a "gap" in the substitution chain as between the products of any (two) producers, on account of the different costs of bringing the product to his door. The simplest case is to assume that the demand of each consumer is for one unit of the commodity, and this demand is perfectly inelastic with respect to price. (This will mean a perfectly inelastic Chamberlinian DD′ curve. It is not a necessary condition: the consumers could have been assumed each to have a demand with an elasticity greater than zero.) In these conditions, if each producer charges the same price, the "share of the market" of each will be the same; the boundaries of the market of each seller are determined on either side by the point at which its price + transport costs, becomes equal to that of the adjacent seller. Of course, such a model is inappropriate for the "polypoly" analysis because the notion of impact effects spread over all sellers in the group is inconceivable; and there are similar difficulties in connection with entry. Professor Chamberlin ("M.C.R.", *passim*) recognises these difficulties, but follows the spatial analogy far too simply and exhaustively.

in the penultimate sentence are quite differently interpreted in the normal cost theory; and in terms of its analysis, the attempt of the imperfect competition theory to analyse in particular equilibrium terms the sort of "industry" it envisaged, may be justified. Indeed, the normal cost theory may be interpreted, like the imperfect competition theory, *as an attempt to take account of the separableness of the individual producer's market, and at the same time, to retain the particular equilibrium approach;* but it would do so in a manner different and logically more sound than the imperfect competition theory.

The foregoing discussion of the dd′ curve, however, only serves to point the criticism of Triffin, that the presuppositions of the imperfect competition theory necessarily deliver the theorist over to the general equilibrium approach.[10] In fact, as a result of Triffin's attack, there is a widespread tendency today to emphasise, rather than to play down, the *unique* character of the product of each seller. All those factors which serve to distinguish the products of different producers, are thrown into one grand pot-pourri of differentiation.[11] The economic process is then seen as a "complicated reality of multidimensional product diversity", where each seller has a demand curve for his own product which "has a downward slope whose steepness will depend upon how highly people value the unique elements of his own product . . , as compared with the available substitutes".[12] Since "in general [each seller] is in close competition with only a few others", the said demand curve (and the corresponding curve of marginal revenue) is indeterminate; the idea of the "group" is ruled out; and all that is left for the economist to do, is to set out a static general equilibrium equational system.[13]

The normal cost theory of prices and production in manufacturing industry, necessarily begins in simplified—in fact, ideal—terms. The resultant theoretical structure may be termed the "first approximation", in Schumpeter's sense. Subsequently, *but with consistent logic,* the basis of this structure is broadened to attain a greater realistic content.

The first and fundamental purpose of the "first approximation" is to reconsider the nature and *modus operandi* of the "goodwill" factor in manufacturing. In this model it will be assumed initially that a number of manufacturers *are producing a standardised product.* This will at first sight appear very strange; for ever since the appearance of the theories of imperfect competition in 1933—in fact, since Sraffa's article in 1926—"goodwill" has been associated with

10. *Op. Cit.*, pp. 82-89.
11. Thus see Chamberlin: "M.C.R.", pp. 346-348.
12. Chamberlin: "M.C.R.", p. 347.
13. For the quotation, see Chamberlin: "M.C.R.", p. 350. The demand curve is indeterminate—except instantaneously in the (general) equilibrium situation—since in the general oligopolistic situation, it cannot be given an *operational* definition. (*Cf.* Triffin: *Op. cit.*, p. 69.) The group is ruled out; and Chamberlin writes: ". . . The problem of 'entry' disappears along with the group and becomes absorbed into the larger problem of the distribution of resources throughout the entire economic system". ("M.C.R.", p. 362.) But not only *entry into the group;* entry in the limited sense of undertaking the production (or sale) of a product identical with that of any one existing producer (or seller), is ruled out also. For where the products of each of the existing sellers is in some respect(s) unique, so also, for the same reason, will be the product of any new firm.

differentiation of the products of the various producers, while on the other hand a standardised product, subsequently redefined (tautologically) as economically homogeneous, has been associated with the necessary absence of "goodwill" relations. But this order of ideas is fundamentally wrong when our object is to analyse the formation of prices in manufacturing industry. Our primary purpose, therefore, is to argue that in manufacturing industry, if the products of a number of producers are in fact identical in all relevant empirical respects, so that we can speak unambiguously of a "general market" for this product, that market, wherein one price will rule for the product, will nevertheless be separated by the goodwill factor into the particular markets of the individual manufacturers.

The conception is, that goodwill determines the channels of trade, but at the same time, this is not a power to maintain an independent price policy. This is contrary to the fundamental presumptions of both the "pure competition" model and the theory of imperfect competition. In effect, it combines one element of the market situation envisaged by the former, with one element of that envisaged by the latter; while at the same time it rejects other elements of both. As regards the "pure competition" model, it has never been true of manufacturing industry that each seller has a random relation to the custom of the market. Nevertheless a seller will not continue to get a price for his product which is higher than would be taken by any other seller of the same commodity. Imperfect competition theory, on the other hand, readily recognizes the role of goodwill in separating the general market into the particular markets of each seller. But it argues that this very condition differentiates the products of the various sellers, and the individual seller is thereby empowered to maintain a price different from his rivals. This is denied by the normal cost theory.

In terms then of this modified conception of the operation of the goodwill factor, the idea of the general market separated into the particular markets of the individual producers is seen to be logically compatible with the particular equilibrium approach; this was the basic difficulty for the imperfect competition theorists. Then, in the more general theory, a broader conception of the "industry" is introduced, which admits of the empirical fact that, in general, the products of the various manufacturers are in some respect(s) different. The argument proceeds in two stages. First, attention is directed to the case where the products differ in that they consist for each producer of specialities within the broad class of product, designed to cater for the particular wants of particular classes of customers. Thus in one branch of the "engineering industry", one producer may specialize in complicated mechanisms to order, while another may

concentrate on the mass production of a more standardised product. The essence of this case is that concentrated sales effort to popularize a particular brand of a more or less standard product (as, e.g. cigarettes in packets of ten, or electric motors of one h.p.) is still not explicitly introduced. These questions—together with the question of the effect of location (and transport costs) in product differentiation—must be taken into account in a further stage (which will then be the third stage in the general development of the theory, counting the "first approximation" model as the first). The normal cost theory argues that the *modus operandi* of competitive forces, in each of these cases, is not fundamentally altered as compared with the first approximation. Unfortunately, space does not permit of an adequate treatment of the third stage of the argument; the reader is referred to P. W. S. Andrews: (*), pp. 145-156, 185-204, and (§), *passim*. It is then, to lay bare the action of competitive forces in manufacturing industry, which is the important analytical purpose served by the idealisation of a standardised product; but that assumption is provisional only.

Before turning to the "first approximation" model, attention should be drawn to an important aspect of the market conditions of modern manufacturing business, emphasised by the normal cost theory; namely, that in general, the immediate customers of a manufacturing business are other businesses—manufacturers or traders.[14] The products of the manufacturing industries may be classified, first, according as the final consumer of the product is (1) a business, or (2) a personal consumer of the conventional kind. Under (2) will be classified all finished consumer goods proper—e.g. soap, packaged foods, cigarettes, clothing, furniture, radios, etc. Under (1) will be classified not only machinery and equipment for use in production, but all manufactured raw materials, fuels, supplies, etc., used in the production of that machinery, and also of all the products under (2). Hence, e.g. steel, heavy chemicals, etc., and also flour, sugar (for industrial use), cardboard, tanned hides, prepared timber, etc. Further, the major part of the output of manufactured construction materials (bricks, cement, galvanised iron, etc.) will come under this head.

Next, the products in each of the classes (1) and (2) may be classified according as the product is sold by the manufacturer direct to the final consumer, or indirectly, via independent traders, wholesale and/or retail. The proportion of manufactured output under (2) however—i.e. personal consumption products sold directly by the manufacturer to the consumer—is small in present conditions; it may be neglected for the purposes of a general theory.

14. Andrews: *, p. 149.

In the "first approximation" model, we shall have in mind the type of products in Class (1).[15] That is to say, the *final* consumers (customers) of the product are businesses. In this model we shall not taken into account explicitly the interposition of the dealer (which obtains by definition for products under 1).

"First Approximation" Model. Consider then the following process of production. Suppose (1) that a number of manufacturers already in business are producing the identical (physically standardised) product, which is a semi-finished manufacture; (2) that their factories are all situated in a particular area in the centre of a large industrial city, throughout which the product is utilized by finishing trades, for which this product is a raw material; (3) that there are no significant differences in the personalities, credit facilities offered, etc., of the various manufacturers; and (4) that both the manufacturers producing our product, and their (business) customers are concerned to maximize their positions (profits). It should be emphasised that in the normal cost theory, it is *not* denied that the entrepreneur seeks to maximize his profits. That assumption, indeed, is the one safe and unquestionably appropriate generalization in economics, and the economic theorist will do well never to lose sight of it. Assumption (2) is designed to ensure that there can be no preference among the users of the commodity for the product of one manufacturer, as opposed to the products of the others, on the basis of costs of transport.

In these circumstances, the products of the group of manufacturers are standardised in every relevant empirical respect. In the equilibrium of the industry as an established continuing process, one price will rule for the products of all the manufacturers. Then the first and fundamental question is: is there any room—or, indeed, is there any reason—in this situation for goodwill relations, which pair a particular manufacturer with particular buyers of the product, so that the former is assured of the custom of the latter, and this custom constitutes the normal channel of his trade? In other words: is it reasonable to assume that, at any point of time in this continuing process, and at the prevailing price, the general market is separated into the particular markets of the individual manufacturers in terms of stable goodwill relations?

The answer to this question is assuredly "yes". It is a matter of the *continuity* of a process of production, *in the absence of a central marketing organization for the disposal of the product.*

15. Such products would account for something more than 50 per cent. of total manufacturing activity, in a mature industrial economy, such as Great Britain. The analysis would apply without further argument to a final consumer good under II, not branded (and advertised) by the manufacturer himself. The latter products require the argument indicated as the third stage of the normal cost theory.

We must elaborate the contrast with the pure competition model —or rather, with the organization of the total market which does in fact obtain in agricultural industry, indeed primary industry generally. For in the case of most primary products, *central dealing is the basic characteristic of the market process.* The essential point is, that this condition of things *does* realise in practice the market presumptions of the pure competition model—i.e condition (2) above, with the appropriate assumption from (4) added. The outputs of the many (small-scale) producers whose farms are widely dispersed over a particular region or area, are gathered together at some central point—the "market", speaking thereby in everyday terms—and there the total output is graded, and grouped into lots of uniform quality, etc., and then offered for sale *so as to clear the market.*[16]

The aspects of this process, which are important for our purposes, are: (1) that the produce of the many (small-scale) producers is classed and graded at the market, in general by independent experts, and according to objective and established standards; and the product is then sold in bulk in relatively homogeneous lots; and (2) that the individual producer is assured of the sale of all he may produce in the current period of production.

In this situation, there is no room—and, indeed, no reason, for goodwill relations between the individual producers and the purchasers of their produce. From the point of view of the latter: the product—by nature, subject only to gradual changes in specification over long periods of time—is presented on the market, in general having been classed or graded by the independent experts according to objective tests and standards. *So assured,* a buyer of any particular grade will have no reason to prefer the product of any particular seller of that grade as against the product of another such seller; and the products of the various producers will be merged quite anonymously in the aggregate output. In the case of the seller, on the other hand: by the very processes of such a market, he is assured of the sale of all he may produce and at a price no lower than that obtained by any other seller of the same grade of the product. He cannot do better than this.

The situation, however, is quite different in the case of manufactured goods. *The organized central market does not in general obtain in manufacturing industry.* In this sector of industry, the individual producer sells direct to the traders—wholesale and/or retail—who are supplying his product to the final consumers, and *not* via the centralized selling organization, to the former, as in the case of primary products. That in this situation there *is* room for

16. When we speak of "primary products" we have in mind not only the major agricultural grain crops—wheat, etc.—but also potatoes, and fresh fruit and vegetables generally, fresh fish, meats—beef, mutton, pork—and in addition the fibres—wool, cotton.

goodwill relations—indeed, that they are as essential an aspect of the situation as the centralized selling organization is in the case of primary products; and that this is true, even where, as in the model, the products of a number of manufacturers are identical, may be seen as follows.

In the first place, from the point of view of the buyers. The product of a particular manufacturer[17] will be bought on the basis of a written specification, or the buyer's own judgement of the product as he appraises and tentatively samples it in the first instance. The qualities embodied in the product, however—in terms of workmanship, class of materials used, etc.—are in most cases not obvious, even to the most discerning of buyers. Now the buyer of a manufactured product has not, as in the case of the buyer of primary produce, a *market* consensus of opinion as to the quality of the product before him; he has, on the contrary, only the guarantee of the *individual* manufacturer. The essential quality of a manufactured product, therefore, can be assessed only by experience. But the buyer's need for the commodity is, in general, continuous: in this, as in other contexts, the fundamental continuity of the economic process is the governing factor. In these circumstances, if the product of a particular manufacturer brings satisfaction, it will also bring the habit of purchasing *his* product. If the product of this seller has in the past satisfied the buyer, so long as it continues to do so, at least as well as any other product *at the price*, the seller is assured of the custom of this buyer.

That the products of all the manufacturers in our hypothetical situation are identical *by hypothesis*, does not alter the case. In setting up business in the trade utilizing the product, the entrepreneur will order from one, or at most several (so as not to have "all his eggs in one basket"), but certainly not from all, the manufacturers of the product. The *initial* choice of the buyer may have no particular rational basis; but subsequently, *from his point of view*, the product and its associated services—including the regularity of the supply—of the one manufacturer (or several) from whom he is buying, has been, and is being, proven; which is not true of the products and associated services of the other manufacturers, even where the latter are in fact identical with the former. This, indeed, is to deny, not only the second postulate of the pure competition model, but also the fourth (which is, of course, a condition of the former), namely, perfect (instantaneous) knowledge of all possibilities. That assumption *is* sufficiently valid in those situations to which that model is relevant, namely primary production, where the output of all the producers is assembled for (inspection and) sale at the central market. But

17. Cf. Andrews: *, pp. 146 ff.

it is not valid in the case of manufacturing industry. The absence of the centralized selling organization in manufacture is the crucial factor. The relevance of the pure competition model, therefore, is not a question of the relative degree of standardisation of the product (as between primary and manufactured products) which does obtain in fact, as is commonly supposed; so that the idealisation of a standardised product in analysing the economics of manufacturing business is not so strange as undoubtedly it would appear at first sight.

But I hesitate to say that, in terms of the foregoing argument, the products of the manufacturers are thereby "differentiated"—because of the historical associations of that term. For that argument is *not* to deny that the individual buyer (a business man) from time to time will sample the products of the other manufacturers; this he will certainly do, if he has reason to suspect that the product with which he is being supplied is inferior in some respect to that of the other producers. And at times—e.g. in the event of seasonal pressure of demand on his customary supplier—he will be forced to look to other suppliers. But here we are bordering on a second question, related, but logically distinct, namely, whether goodwill can be exploited because it is goodwill. This question will be dealt with subsequently.

From the side of the buyers then, in the case of manufactured products, goodwill attachments to particular manufacturers will tend to establish themselves in terms of the confidence given by previous custom, even if the products of the latter are standardised in all empirical respects. Consider the question now, in the second place, from the point of view of the manufacturers. Again, the powerful and preponderating continuity of economic life is the governing factor. The fundamental pre-requisite of normal and efficient manufacture is a continuity of production and sale in response to a stable and continuing demand. In the first place, in many cases the technical processes of production themselves necessitate continuous working for maximum efficiency. This factor will vary in importance according to the particular industry. The example which immediately comes to mind is the iron industry; both the length of service, and the efficiency of a blast furnace are affected by spasmodic and irregular working. Apart from such purely technical considerations, however, there is, in the second place, the more general and all important question of the incidence and regularity of the paying-out costs of a manufacturing business. This is not only a matter of the direct costs of production—the costs of materials currently supplied by other businesses, and the wages of prime labour—but also of the salaries of overseers, managers and office staff—part of the overhead costs of the business—which also must be met in the current period

of production; weekly, or perhaps more commonly, monthly. That the working capital represented by these wages and salaries, and the costs of materials, must be periodically replenished if a business is to continue, is obvious. What is also important is that the efficiency of the business will depend on the continuity of the employment of the firm's trained personel; this is not only a matter of the managerial staff, for even the unskilled employees of the business will be adapted to the requirements of their tasks in this business, and when once laid off, can, in general, be replaced only by others who for a period at least will be less efficient. In the third place, there is the question of the efficient planning of extensions to, and reorganization of, large-scale capacity. Here the dynamic element, the trend of demand (and of the resultant volume of output per period), is the determining factor; but it is the trend of a regular and continuing demand which is in question.

Regular production, then, in response to a stable and continuing demand, is the *conditio sine qua non* of normal and efficient manufacture. Now the primary producer is assured of the sale, in the central market, of all he may produce in the current period of production. *The individual manufacturer is not; because the centralized selling organization characteristic of primary industry, does not obtain in manufacturing industry.* In these circumstances, the foundation of a stable and continuing demand for the individual manufacturer is regular custom—the effective demand of buyers attached to the business by the reciprocal goodwill relation. This is the rationale of the goodwill factor from the point of view of the manufacturers themselves. It is quite generally true of manufacturing and commercial business. The first task of the would-be business man, indeed, is to capture the goodwill, *and thence the regular custom,* of part of the market, and subsequently to maintain and extend the goodwill he commands; for this is the essential basis of normal and efficient business operations.

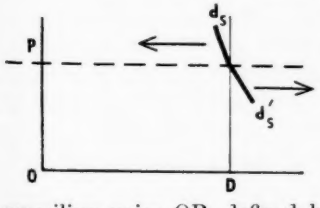
In the continuing process of production (and ruling out cyclical variations in business conditions), the demand of the individual firm will nevertheless vary from (production) period to period. For apart from the recurring demand of the regular clientele of the business, the demand per period will contain a residual component—the business's share of the "floating demand" of the unattached or partially attached buyer.[18] It is important for certain purposes to distinguish these two components of the individual business's total

18. The proper conception is not that some of the buyers already in the market are wholly attached, others partially attached, and some completely unattached. It is, rather, that all buyers are incompletely attached; the greater part of their regular custom is directed to the favoured seller, but at any point of time, each is looking to, and is susceptible to the approach (in terms of superior products, price-cuts, advertising, etc.) of other sellers *to some extent.* This "floating demand" also includes the entirely new buyer.

demand per period. Goodwill relations are not unalterable; but in an established industry, the newcomer can acquire goodwill only gradually, and with difficulty; and for every business, it can be maintained and extended only by continued vigilance and conscious effort. In this the best defence is attack; and the floating demand is the field for this contest. Assuming a stable market demand curve, the relevant demand concept in a more dynamic analysis is the *trend of demand* for the output of a particular producer (at the competitive price). His sales will vary from period to period, and these variations will show themselves as deviations above or below the trend, which will be rising in the case of a vigorous business, and falling in the case of a stagnant business.[19] In analysing the position of the industry *at a point of time*, nevertheless, the normal cost theory rightly assumes the extent of the market of the individual producer as rigidly determined at the trend volume of demand (sales); i.e. the existing pattern of goodwill relations is a *datum* of a short-run (or static) analysis.

Thus goodwill relations are of the essence of the organization of manufacturing industry—the outcome of *rational* conduct, given the nature of manufactured products and the conditions of their production and sale. This is quite generally true; in particular, it is true in the conditions of the model, where the products of the various manufacturers are standardised in all empirical respects.

The goodwill factor then separates the general market into the particular markets of the individual manufacturers. But in the industry as an established continuing process, this is not a power to maintain an independent price policy.



Let OP in the figure be the prevailing price of the product,[20] the broken line being drawn across the figure at that level of price. For a particular manufacturer in the model, let OD be the (trend) volume of demand (sales) at the prevailing price OP, defined by the extent of the goodwill he commands.

The curve $d_s\, d_s'$ depicts the probable short-term effects of price changes by this producer if the other producers maintain the price OP.[21] *It is not denied* that the customers of a manufacturing business will not *immediately* forsake it, in the event of a (small) rise in its

19. But the variance of his total sales per period (trend removed) will be of a much smaller order of magnitude than if the whole of his sales per period were subject to the random factor.

20. It is part of the argument to establish that one price will rule for the product. So at the moment, we *assume* this is so.

21. It is unrealistic to assume anything but small changes, up or down. But to give the curve definiteness, it is shown for a wide range of price.

price, or a (small) fall in the price of a competitor.[22] On the contrary, the argument of the preceding section suggests not merely that this is true, but that the demand for the product of a particular manufacturer in the short run, the prices of his competitors being held constant, may well be quite inelastic, particularly for a rise in price. For the product (and associated services) of a manufacturer can be adequately assessed only by experience. There are, therefore, risks attached to a complete changeover: the price differential may not prove permanent—the rise in price may be the first move in a concerted rise on the part of the entire industry, or the rival may not be able to maintain the proffered price-cut—and if it does not, then the buyer may find that he has exchanged a regular supply, of consistent quality, for the reverse. That is not to say that, in normal times, he could not revert to the original supplier. But if the product purchased in the interval *were* to prove inferior, that would in many cases involve losses far in excess of the saving effected by the transfer of custom;[23] and the change-over themselves will involve delays, and inconveniences (in terms of altered routine, and so on). The customers of a manufacturer, therefore, will not in general immediately effect a complete change-over in the event of a rise in the latter's price, or a fall in the price of a competitor.

The $d_s d_s'$ curve, nevertheless, will necessarily have some elasticity (slope). For a rise in his price, the producer will lose *part* of his regular custom, as all or most of his customers look elsewhere and sample the products of other producers; and he will also completely forgo his share of the floating demand. Nevertheless he will retain the bulk of his regular custom. The demand would be more elastic for a fall in price; because he will attract thereby, not only the trial purchases of the customers of all the other sellers, but in addition, the lion's share of the floating demand. But in general the number of competitors is small, and the scale of the typical business in relation to the relevant market area, large. While more elastic than for a rise in price, then, the demand for a fall may yet be inelastic in the technical sense.

But (the other producers maintaining their prices constant) these results will be short-term only. The curve $d_s d_s'$ *must not be confused with Chamberlin's dd' curve*: this indeed is the fundamental issue. Chamberlin's dd' curve is something entirely different. It is assumed to show the volume of demand the producer could *permanently* command at each price—so long as his competitors hold their prices constant, the curve $d_s d_s'$, drawn on the same assumption—that the other producers hold their prices constant—is, in contrast,

22. Cf. Mrs. Robinson, *op. cit.*, p. 90.
23. It will be remembered that we have in mind a semi-finished manufactured product.

no more than a *temporary* reaction curve, relevant in the short-term immediately following a price variation. *Subsequently,* if the price change is maintained and the other producers hold their prices constant, the curve $d_s d_s'$ will shift. For a price above OP, it will shift in the direction of the arrow above the broken line in the figure, falling in the limit to zero; for a price below OP, it will shift in the direction of the arrow below the line, in the limit, to the full extent of the market.

It will shift in this way; because the products of all the manufacturers are, by hypothesis, identical in all empirical respects. That being so, the customers of a particular manufacturer will not *continue* to purchase his product if he raises his price, or a competitor lowers his.[24] The customer in our model is himself a business man, who has his own competitive position to consider *vis-a-vis* his rivals in his own trade. As a business man, the buyer will not be ignorant of the opportunities for buying elsewhere. The risk and inconvenience of a change in his source of supply, therefore, will not long outweigh the risk of losing his own connection if he passes on the increased price of his supplier, or the pecuniary loss involved if he continues to supply his own product at the prevailing price (the maximization hypothesis). Thus *the businessman customer's own competitive position is certain to override the goodwill relation after a (short) period.* There is no room in this situation for a sentimentalised concept of goodwill, such that the buyer is assumed to continue to purchase (albeit in smaller quantity) from the favoured seller at a higher price; instead the situation is seen in its correct light—as one in which the buyer prefers to deal with the customary business, but only so long as there is no disadvantage in doing so.[25]

The shift in $d_s d_s'$, *notwithstanding the goodwill factor,* as compared with the stability of the Chamberlinian dd' curve, epitomises the contrast in fundamental presuppositions of the normal cost and marginal theories. In the view of the latter, the goodwill factor is inextricably bound up with all the other factors in product differentiation—"irrational" preferences as such on the part of consumers, differences in brand names and packages, and locational differences. In terms of these factors, the emphasis in modern theory has been placed, as we have seen, on the unique character of the product of every seller—which justifies the fixed price-quantity demand curve for the individual seller. It is, nevertheless, determinate only instantaneously in the (general) equilibrium of the system. The significance of the factors mentioned is quite differently interpreted by the normal

24. On the following argument, see Andrews: *, pp. 148-157.
25. The curve will move by stages because some customers will change over more quickly than others. That will depend *inter alia* on their individual temperaments, and (hence) their expectations as to the permanence of the price change.

cost theory, beginning with the goodwill factor as in the present section. The essence of the matter then, is that this fundamental difference in interpretation has driven the marginal theory to eschew (albeit unwillingly), and the normal cost theory to retain, the particular equilibrium approach: so that *the contrast between the marginal and the normal cost theories today is seen as the contrast between the general and particular equilibrium approaches in economics.*[26]

It follows then, (1) that the individual competitive manufacturer cannot maintain a price higher than his rivals; and (2) that if he cuts his price, his competitors (in general, few in numbers) will be obliged to match it. The goodwill factor, that is, does not empower the individual producer to maintain an independent price policy.

Moreover, in established conditions the price will tend to be stable; the individual manufacturer will supply his product up to the limits of the goodwill he commands, not attempting to raise his price to exploit the goodwill factor, nor to cut price to circumvent the barrier of the goodwill limitation. This is an aspect of the equilibrium tendency of the system; and such an anlysis must begin with a discussion of the theory of entry.[27]

First, it is in this context that the central significance of the gross profit margin—the margin between price and the direct cost per unit of production—in the normal cost theory is apparent. Given

26. The contrast with the pure competition analysis, on the other hand, is that in it, *there is no* d_a d_a' *curve to shift,* since buyers are paired with sellers in each period at random.

27. It will be necessary to take account of the production (cost) side of the picture. (Our primary concern in this article is the demand side. The following totally inadequate statement should not obscure the fact that the essential novelty of the normal cost theory consists in its analysis of costs of production.) The important propositions are:

(i) Average direct costs will be constant over a range about the "practical optimum" output of the plant, and *hence* in his pricing policy, the entrepreneur thinks in terms of a single figure—*the* direct costs per unit of producing the product in his factory. The notion of the "practical optimum" and of constant average direct costs, is related to the prior proposition that the entrepreneur will always *plan* his plant so that there is an excess of capacity over that required to produce the volume of output he projects. See Andrews: *, pp. 87-93, and †, pp. 58-60. Then, *granted this reserve capacity* (and insofar as the largest indivisible equipment can be worked efficiently at an output to the left of the "practical optimum", the "fixed plant" is in fact substantially variable in relation to output over a range extending some distance each side of the "practical optimum", in which there are hence constant average direct costs).

(ii) The business can calculate the (total) direct costs of a particular output with considerable accuracy *ex ante,* but this is not true of the overhead costs of production. The salaries of office staff and the management personel, the rent of land, etc., and fixed capital charges, present no difficulty. But the overhead costs of a going concern must also be taken to include depreciation and obsolescence charges (and perhaps an allowance for contingencies). The former are legitimate elements of the current costs of the machinery and equipment used in production. There are no objective criteria to determine these elements of costs, as compared (e.g.) with the prevailing rates of wages and the technical conditions of production in the case of labour costs.

(iii) Finally, as regards the so-called "long-run cost curve" of the individual producer. In this connection, the "managerial" and the "technical" costs of production should be distinguished. (Andrews: *, pp. 113-115.) The latter are likely to fall continuously with increases in scale, though the fall gets less steep as the scale increases. The analysis of managerial costs is more complex. *For any one management,* they are likely to fall for part of an increase in scale, but to rise thereafter though with diminishing strength. But in practice the great variations in the inherent efficiencies of different managements swamp this relationship of size and efficiency. The important point is that inasmch as the business man will not expect himself, or the management generally, to become less efficient just because the business grows, his *expectation* will be influenced only by the (probably falling, but at all events constant) technical costs of production. The *expectation* of falling costs (increasing returns) may well therefore be almost universal throughout the manufacturing sector of industry; even if actual long-run cost is rising—i.e even if, when the new scale of output has been achieved, a decline in managerial efficiency should in the event belie the expectation of the business man (which will not generally be true).

the specification of the product and the method of production,[28] a prospective new producer can calculate with considerable accuracy his direct costs per unit of producing the product. But, even given the scale of production he projects, there are no objective criteria to determine the precise level of his overhead costs (Prop. (ii).) He will, nevertheless, proceed to estimate them, adding on a margin as for net profit. But it seems only too evident that his estimates of the components, and thence the sum, of his overhead costs *will not be independent of the gross profit margin before him;* that is, the difference between the existing price, and his own estimate of the direct costs per unit. It is certain that the objective fact of the latter will inevitably affect his reasoning as to the former. The question of entry, therefore, is not a matter of an objective comparison between a given price and a calculable (average) total cost. It is rather a matter of a prospective gross profit margin, in relation to the (prospective) producer's ideas as to the appropriate level of his overhead costs; and the final decision of the latter is not independent of the former.

This accounts for the crucial importance of the gross profit margin in the normal cost theory. It means that equilibrium—for each producer and for the industry as a whole—is defined in terms of a (normal) gross profit margin, not a normal level of net profit. And that implies, in turn, that in general the problem of the individual entrepreneur in quoting price is to fix upon the "right" gross profit margin—"right" in the sense of just such as to discourage the setting up of new capacity by normally optimistic enterprise; a margin—to be added to his *determinate* direct cost per unit in order to arrive at the price—which is *indeterminate* in terms of the magnitude of his overhead costs plus net profits (for the proposed volume of output), as specified independently by the producer himself.

Second, observe that just as the goodwill factor *per se* is not a power to maintain an independent price policy, similarly it is a provisional, but not an absolute, obstacle to entry. There is one certain way in which a new producer can gain access to the market *despite the goodwill factor*: he can offer his product at a lower price than that prevailing (providing of course his cost conditions permit). He will thereby attract to himself the floating demand of the market, and, in the short-term, the trial purchases of all or most of the buyers of the product. In the longer run, if the existing producers maintained their prices, he would capture the whole market. It is hardly necessary to emphasise that the present position is an aspect of the fundamental difference in viewpoint of the normal cost and marginal theorists. The latter, arguing by the multiplication of causes, sees the goodwill factor as one of a number of necessarily associated causes which so differentiate the products of different producers that each is in some respect(s) unique. That conception, as already noted, necessarily precludes the possibility of entry.

Finally, it must be emphasised that in the industry, as an established process, the threat of new competition if the gross margin is set too high will not in the majority of cases arise from brand new

28. It is assumed that in relation to the use the product in question serves, its specification is fixed absolutely: so that any new producer must necessarily turn out the same product. Substantially fixed coefficients of production *at any given scale* are also assumed; which does not rule out variations in costs as between firms of the same scale, due to the management factor.

firms specifically set up for the purpose. On the contrary, granted the limitation of the markets for their existing products (in terms of goodwill each commands), established businesses will be looking around for related products which they can take on.[29] (This aspect of the process is more readily appreciated when we conceive of the industrial environment of a particular producer in terms of other firms engaged in a similar *process of production*). This aspect is important for the theory of entry in two ways. First the large-scale modern enterprise has, in general, the necessary capital resources (cash) readily to hand, so that, *cet. par.*, it can enter the trade and set up business more quickly than the brand new business when the opportunity arises. Second, granted the profitability of its primary markets, the established business will be in a better position than the brand new business to hang on in the hope that time will justify its efforts, in the event of initial setbacks. In terms of the established business seeking to extend its lines of activity, new entry is likely to be much more prompt and tenacious than when we think in terms of the brand new business.

The character of the (static) equilibrium tendency of the system may now be adumbrated against the background of the general contours of the development of a new industry. We may break into this process at a stage where: (1) the aggregate demand function for the product has stabilized and (2) the process of production has been consolidated: the method of production has become more definitive; the tendency to a mushroom growth of small businesses in response to the rapid growth of demand in the early stages when the product "takes on", has abated; and the concentration of output—as the more efficient firms have grown, and others have been driven from production (the market outlets, and even the equipment, of the latter, assisting the growth of the former)—is well advanced.[30]

At this stage, in the industry as an established, continuing process, the individual entrepreneur will not seek to raise his price, to exploit the goodwill factor. Goodwill *does* empower the individual producer to raise his price, in contrast to the pure competitor, and there *is* a short-term advantage to be reaped by doing so. The curve $d_s d_s'$, we argued, may well in the short-term, following a price increase, be quite inelastic; whatever is true of average direct costs then, it follows that profits will necessarily be increased by a rise in price along $d_s d_s'$. Nevertheless, in normal circumstances—i.e. assuming no general increase in costs to the industry—the individual entrepreneur will not seek to raise his price to reap this advantage.

That is a consequence of the overriding requirement of continuity in the process of production, in face of the twofold pressure of (1) the threat of new competition if the gross profit margin is set too high, and (2) the almost universal expectation of falling long-run costs of production, on the part of each individual producer, in terms of falling *technical* costs of production. The last two conditions

29. Andrews: ‡, p. 167.

30. We assume a unilinear fall in price with the progress of the industry to this stage, as new producers have entered and successively undercut the existing producers to gain a place in the market. (The initial producer(s) are bound to have set the price higher than the subsequent equilibrium price.) At the present stage, while each firm remaining in business will have adjusted its estimates of the indeterminate elements of overhead costs (including net profits) to the prevailing price, nevertheless there will be an "efficiency" ranking of the firms according to their direct costs per unit of production.

ensure that *some* firms at least—and particularly the more efficient—will not follow the lead of any one firm in raising price, but will seize on the opportunity so presented to expand their production and sales, limited at the prevailing price by the extent of the goodwill each commands, and so to increase—in the long run (i.e. when fully readjusted to produce the increased output), and *permanently*—their profits. But if these firms hold their prices constant, that means that the $d_s d_s'$ curve for any one producer contemplating a rise in price, will shift—which means the loss of goodwill. It is true that where the demand to the individual firm in each period represents simply its random share of a general market, it could escape unscathed; *but in that case the individual firm does not possess the power to raise its price in the first place.* Either the business commands goodwill, or it does not. If it does, then this is the result of continuity of service in the past; and since goodwill is the fundamental prerequisite of efficient and continuing business—now and in the future, as in the past, the firm which proposes to remain in business will not seek to raise its price for the sake of the short-term advantage indicated. It might do so once, and promptly lower its price again, and, while gaining little and risking much, remain substantially unaffected; but it obviously cannot do that every successive (or alternate) period.

As to this result, it may be objected that the maximization postulate in these circumstances is not unambiguous. That is readily granted. It is, indeed, just one aspect of the truistic ambiguity of the proposition that profits will be maximized if marginal revenue is equated to marginal costs.[31] In the present case, however, there is little doubt as to which is the proper interpretation of the maximization hypothesis.

It follows then that price will be stable upwards so long as normal conditions obtain. Next consider the question of a reduction in price. We have argued that if one producer cuts his price, his competitors, after a (short) period, will be constrained to match the cut. Assume first that it *is* possible (in terms of sufficient profitability in the long run) for each of the other businesses so to reduce price, that all remain in business. It is doubtful whether in these circumstances, there is any advantage, either short-term or in the longer run, to be gained by the initial cut. If constant average direct costs prevail in the short period before the price cut is matched, it is a question of the elasticity of the $d_s d_s'$ curve for a fall in price; and in the longer run, it is a question of the elasticity of the market demand curve for the product. If then the price cut is to prove profitable on the present assumptions, it is necessary, representing either of these elasticities by ϵ, that $\epsilon > \dfrac{1}{1 - \dfrac{adc}{p}}$.[32]

If this condition does not obtain, then the increase in total revenue will be less than the increase in total costs.[33] According to

31. Of course, if $d_s d_s'$ were inelastic without limit, then the short-run situation is itself indeterminate in terms of the equation of mc and mr.

32. Where adc = average direct costs of the producer contemplating the price cut, and p is prevailing price. We are here concerned only with broad orders of magnitude.

33. In the long-run case, it is assumed that in the neighbourhood of equilibrium, the decline in direct costs will be negligible.

census data, the ratio of adc/p in many industries is of the order of ·6,[34] so that $\frac{1}{1 - \frac{adc}{p}}$ may well be of the order of 2·5. We have argued that, for the period immediately following the price cut, d_s d_s' may well be inelastic: it is, in any event, highly improbable that its elasticity will exceed the order of 2·5. In the longer run, the elasticity of the market demand curve is in question. All that can be said is that the move will be profitable if this exceeds $\frac{1}{1 - \frac{adc}{p}}$ and unprofitable in the reverse event. But again, if the foregoing orders of magnitude are at all representative, the probability seems to be that the elasticity will be $< \frac{1}{1 - \frac{adc}{p}}$

If this conclusion is correct, then *in normal conditions* the individual firm will cut price only on the conditions (1) that in terms of its own cost situation, the firm is confident that it can profitably produce an increased output at a reduced gross profit margin; and (2) that there are firms in the industry who are just holding on at the present price, and will be driven out of business at a lower price. Granted this latter condition—the firms in the industry in general being small in number, so that the share of the market of each is considerable—the elasticity of the demand to the firm may well exceed $\frac{1}{1 - \frac{adc}{p}}$

If at the present stage of development of the industry, the conditions (1) and (2) of the preceding paragraph obtain for the most efficient firm(s), then price will be cut. And in this way, *assuming that the structure of relative efficiencies of the firms remaining in the industry now continues constant,* the system tends to a static equilibrium of a stable price, defined by the conditions (1) that the aggregate demand at the price set by the more efficient business(es) is within the capacity of the industry, and (2) there is no tendency for the entry of new capacity by normally optimistic enterprise.[35]

Then, in this equilibrium, the price will tend to be stable. For on the one hand, the individual business will not seek to raise price to exploit the goodwill factor. And on the other hand, the prospect of a price cut is now not profitable for the more efficient business(es), and *a fortiori* for the others.[36]

34. Cf. L. Rostas: *Productivity, Prices and Distribution . . ., passim.* Rostas's figures for "prime" costs would tend to over-estimate "direct" costs of production, in that the former include some wages and salaries of management.

35. (a) The equilibrium is static, in that it is assumed that the structure of relative efficiencies remains constant. This is very unrealistic; indeed it obscures the (dynamic) essence of actual competition—the constant passing to and fro of industrial leadership with fluctuating efficiencies over time. (See Andrew: ‡, p. 171). (b) "Normally optimistic", because the established business will always have to reckon with the competition of the super-optimist.

36. Note, however, that this stability of price in given conditions does not rule out variations in price with changed conditions. Thus, in the event of a general rise in costs (factor prices), some firm(s) will raise price and all will follow. The goodwill factor, indeed, *makes this sort of change possible.* Similarly with a general fall in costs. Again, in times of severe slump, the weak business will always seek a temporary reprieve by price-cutting.

At this stable *cost* price, then, goodwill separates the general market into the particular market of the individual producers. That is the essential role of the goodwill factor in the normal cost theory.

It means that for the individual firm *there is no determinate short period price-output equilibrium,* in the usual connotation of that term; there is, rather, an equilibrium of *price,* but not of output.

Accordingly, to increase his output and sales at the ruling price becomes the primary concern of the business man, in the manufacturing sector. On the demand side he is limited by goodwill (and the normal inefficacy of price-cutting); while on the cost side, his expectation—in terms of the technical costs of production—is of falling, or at least constant, long-run costs; so that he expects an expansion of production at the prevailing price to result in higher net profits in the long run.[37]

For each firm then, there is an equilibrium of price, but not of output. Nevertheless, in the long run equilibrium of the system, there will be a tendency for each of the firms that remain to be producing at, or about, the "practical optimum' for its plant as it obtains at that time. For the plant each initially projects will in general prove smaller than that size to which the firm ultimately attains; and with each (lasting) increase of demand in the evolution of the system, the firm will reorganize (extend) its plant to produce the output with the desired reserve capacity.[38]

Finally, as to the relation of the foregoing theory to the phenomenal forms of price determination. The problem of the individual producer is to fix a price; *not* an optimum price-output combination. And in the stable, continuing production process, the entrepreneur will come to regard the pricing problem as a question of fixing the appropriate gross profit margin to be added to his determinate direct costs per unit, so arriving at the "right" price—i.e. the price at which he will be safe from the appearance of new competition. According to the position he has occupied in such a scale of relative efficiencies as indicated in the equilibrium tendency of the present model,[39] the entrepreneur will have evolved some sort of costing rule, which in any particular case, will yield him the appropriate margin.[40] The margin

37. Hence a normal (non-cyclical) increase in demand will be met in the short-run up to the full capacity of each business *at an unchanged price,* notwithstanding any (short-run) increase in costs—cf. the pure competition theory; because the firm will not risk losing any prospective additional custom to other firms similarly placed—i.e. limited by the goodwill factor, with the prospect of falling long-run costs—by quoting a higher price now. See Andrews: *, p. 137.

38. In this way the analysis is implicitly dynamic; i.e. to explicate the situation as it tends in equilibrium, it is necessary to analyse how it came to be. The present aspect of the equilibrium tendency has been hopelessly confused by Wiles (*op. cit.*, p. 521, and *passim*)—it is an aspect of his general confusion of the normal cost and full cost theories—in that he considers it is argued simply that in any period, so long as the demand is $\geq$ OX, the entrepreneur will produce OX.

39. The price for each producer is the sum of his direct costs per unit, plus a gross profit margin. Since the direct costs per unit vary among the producers, *the gross profit margin for each is different.* (Andrews: *, p. 159 ff., p. 169). It is, none the less, determined by the forces of competition.

40. On the costing-margin, see Andrews: *, pp. 157 ff.

so indicated is the "costing margin", as distinct from the realized gross profit margin; and the sum of his direct costs per unit plus this margin is his "normal cost-price". Hence the "normal cost" theory, as opposed to the "full cost" interpretation of Messrs. Hall and Hitch. The costing rule, be it ever so elaborate, will nevertheless always contain some element of rule of thumb; but it will tend to remain unchanged for any particular business, *as its method of estimating its (competitive) gross margin, indeterminate in terms of its own overhead costs plus net profits.* The business's price, however (and subsequently the rule), will be very promptly revised downward if and when the competition of the more efficient indicates that it is set too high.

Such is the phenomenal form of the business man's action; the analysis of the "first approximation" model is its rationale.

We must now take account (briefly) of the empirical fact that the total output of a manufacturing industry consists of a group of more or less different products, in many cases specially designed to cater for the particular wants of individual customers or classes of customers. A number of firms will now be said to belong to an "industry", if they operate processes of a sufficiently similar kind (which implies the possession of substantially similar technical resources) and possess sufficiently similar backgrounds of experience and knowledge that, if they do not, each one, produce a particular product at any given time, each firm *could* produce it, except insofar as it is restrained by patent protection, or in matters of detail by copyright protection of trade marks, labels, etc.; and, moreover, each firm would produce the product, if it were sufficiently attractive to do so.[41]

The general rationale of this definition in terms of similarity of process, is simple. It marks out that sector of the industrial environment of any particular firm, within which new competition is most likely to develop.[42]

The firms within the bounds of the industry so delineated will in general produce a variety of products. There will be a tendency for the larger businesses to concentrate in the main on the mass production of the more common, standard products; alongside them, the smaller business may concentrate on its own particular speciality within the broad class of product, often a finishing process on the products of the former businesses.[43] The essential point for our present purpose

41. Andrews: ‡, p. 181.
42. Triffin has suggested in effect that, in the delineation of the industry (or group) in terms of elasticities, we should, perhaps, include with Ford the tailoring firm of Rogers Peet, rather than Rolls Royce. (Cf. *op. cit.*, p. 88.)
43. Cf. Andrews: "A Note on Some Economic Limits to the Attainment of Maximum Technical Efficiency in a Manufacturing Industry". (Unpublished.)

is that *the action of competitive forces cannot be assumed different in this situation than in the "first approximation", just analysed.*

Thus in the industry as an established process of production, there will be an equilibrium of price for each producer, as the actual or potential competition of each with every other producer in the industry, establishes the normal gross margin for each. At any time every business will command a regular custom, in terms of goodwill, and will supply that custom up to the limits of its capacity. But so limited in their primary markets, all businesses will be looking around for other products within the group to take on, for the production of which (by definition) they have the right basic equipment and much of the necessary "know-how". While, therefore, there will in general be only one, or at most several, producers of any one product, strictly defined, the effective competition in an industry of this structure will not be less strong than in the idealized conditions assumed in the "first approximation". (It is true, nevertheless, that with this reorientation of our viewpoint, the individual firm—our basic unit—comes into greater prominence, while the "industry" becomes less definitive, being merged into the "industrial environment" of the former).

But while the definition in terms of process permits a logical development of the industry analysis, with the transition to different products the concept of an aggregate demand to the industry loses its meaning. The answer to this is, that insofar as each product tends to be supplied at its normal cost of production, in the (static) equilibrium tendency there will be a stable pattern of relative prices, *vis-a-vis* costs for all the products of the industry. Insofar then as these will be, predominantly, complementary, Professor Hicks's well known proposition will apply approximately,[44] so that the idea of a "general demand curve" for the output of the industry is not without justification.[45]

The purpose of this article has been to reinterpret the role of the goodwill factor *per se* in the competitive process. And in the preceding section it has been argued that the fact of differences in product specification within the one (industrial) process of production, does not invalidate the normal cost, particular equilibrium approach. To complete the theory, it is necessary to reinterpret (1) the role of manufacturers' brands and trade marks and the alleged "irrationality" of the consumer (both in relation to advertising) in the competitive process, and, similarly (2) the influence of location. For it is in terms of these factors, together with a (sentimentalized) goodwill, that the imperfect competition theory, arguing by the multiplication

44. J. R. Hicks: *Value and Capital*; P. A. Samuelson: *Foundations*. . . ., pp. 141-43.
45. Andrews: ‡, p. 169.

of causes, sees the product of each seller, in a process of production of the type indicated above, as in some respect(s) unique; so that the theorist is necessarily delivered over to the general equilibrium approach. The factors (1) and (2) are quite differently interpreted in the normal cost theory; but that must be left over to a subsequent discussion.[46]

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46. See the references to Andrews: * and §, above.

NEWS AND NOTES

Professor L. F. Giblin.—Reference was made in the June, 1951, issue of the *Economic Record* to the death of Professor Giblin, and a short tribute to him was written by Professor Copland. It was also announced that a longer consideration of his life and work would be published later. A number of factors have interfered to delay the preparation of adequate recognition of the value of Professor Giblin's work, but we hope that we shall be able to publish this in our next issue.

We desire to congratulate Professor Hytten, President of the Economic Society and Vice-Chancellor of the University of Tasmania, who has been created a Knight of the Order of St. Olav (first-class) by King Haakon of Norway.

We welcome the appearance of a new publication in the field of economics. This is the *Indian Economic Review*, the first issue of which appeared in February, 1952. Judging by the contents of this issue, which are given in detail in the advertisement published elsewhere, this new journal should be a worthy addition to the growing number of publications which are concerned with the study of economics.

The next meeting of the Australian and New Zealand Association for the Advancement of Science will be held in Sydney from 20th August to 27th August, 1952. Professor W. Prest of the University of Melbourne, is the President of Section G (Economics, Statistics and Social Science).

Three economists have been appointed to Research Fellowships in the Department of Economics in the Australian National University. Of these, Dr. B. M. Cheek, formerly of the University of Adelaide, has recently completed a course for Ph.D. at Harvard University. Dr. A. R. Hall, formerly of the University of Sydney, has completed a Ph.D. at the London School of Economics, and Mr. D. W. Oxnam, formerly of the University of New Zealand, has more recently been a lecturer in the Department of Economics at the University of Western Australia.

BRANCH SECRETARIES

Victorian Branch:—Mr. N. Ellis, c/o. Ford Motor Co., Geelong.

New South Wales Branch:—Mr. E. J. Thompson, c/o. M.L. & C. Ass. Co. Ltd., 46 Martin Place, Sydney, N.S.W.

Western Australia:—Mr. W. P. Mark, c/o. Employers' Federation, Box No. P1225, G.P.O., Perth, W.A.

South Australia:—Mr. J. McB. Grant, c/o. Department of Economics, University of Adelaide, Adelaide, S.A.

Hobart:—Mr. W. A. Hurle, c/o. Town Hall, Hobart, Tasmania.

Queensland:—Mr. F. D. Gillies, Bureau of Industry, Treasury Building, Queen Street, Brisbane, Queensland.

Canberra:—Mr. R. H. Barback, c/o. Canberra University College, Canberra, A.C.T.

Wellington.—Mr. I. F. E. Wilson, c/o. Messrs. Bowden, Bass & Cox, P.O. Box 986, Wellington, C.1. New Zealand.

Christchurch or Canterbury:—Mr. W. Rosenberg, c/o. Canterbury University College, Christchurch, New Zealand.

Auckland:—Mr. A. R. Bergstrom, Department of Economics, University College, Auckland, C.1. New Zealand.

Dunedin:—Mr. C. A. Blyth, Department of Economics, University of Otago, Dunedin, New Zealand.

This information is supplied for the benefit of members and prospective members and also for the use of branch secretaries. Members of a branch at times visit other centres where a branch also exists and may be in a position to address that branch. To make this possible the secretary of the latter branch should be informed of the visit by the secretary of the branch to which the visitor is attached.

NOTES

INSURANCE IN THE AUSTRALIAN BALANCE OF PAYMENTS.

The number of insurance offices and firms operating in the Commonwealth is large. Apart from some fifty local offices in the fire, marine and accident business, and some twenty life insurance offices, there are six State Government offices and about eighty overseas companies (mostly British). Finally, Lloyds underwriters are represented by a number of firms doing quite a considerable business.

The following table shows the premium income in the Australian non-life insurance business and its distribution among the local and overseas insurers.

TABLE I

Australian Non-Life Insurance Premium Income*

(£A millions)

	Australian offices	Foreign offices	Total
1938-39	7·62	9·23	16·85
1939-40	8·00	9·66	17·66
1940-41	8·20	10·23	18·43
1941-42	8·39	11·43	19·82
1942-43	8·58	11·98	20·56
1943-44	8·97	11·36	20·33
1944-45	9·18	10·93	20·11
1945-46	9·83	11·30	21·13
1946-47	11·87	13·38	25·25
1947-48	14·64	17·20	31·84
1948-49	17·69	21·19	38·88
1949-50	—	25·00	—

*Less inter-company reinsurances and returns.

Ten years ago the share of the overseas companies in the Australian non-life business was about 60 per cent., now it is about 55 per cent. A large number of the local companies (17 altogether) are, however, controlled by U.K. companies also, representing about 30 per cent. of the business of all Australian private companies.

The next table shows the operational results of the overseas non-life insurance companies and underwriters:—

TABLE II

(£A millions)

	Premiums	Other income	Total income	Total* expenditure	Balance
1938-39	9·23	·21	9·44	7·96	1·48
1939-40	9·66	·21	9·87	8·00	1·87
1940-41	10·23	·23	10·46	8·19	2·27
1941-42	11·43	·40	11·83	8·65	3·18
1942-43	11·98	·31	12·29	9·15	3·14
1943-44	11·36	·40	11·76	8·92	2·84
1944-45	10·93	·42	11·35	9·70	1·65
1945-46	11·30	·40	11·70	9·23	2·47
1946-47	13·38	·46	13·84	11·06	2·78
1947-48	17·20	·50	17·70	14·87	2·83
1948-49	21·19	·56	21·75	17·63	4·12
1949-50	25·00	·67	25·67	19·17	6·50

The above premium income of the Australian companies and offices represents their gross premium income in Australia, inter-company reinsurances being neutralized. Several of the companies have branches and agencies overseas; the above premiums do not therefore comprise their whole business. On the other hand the Australian companies do a considerable reinsurance business with foreign companies, both acceptances and cessions. No figures are available for this outside underwriting and reinsurance business of the local companies. Indirectly, however, the net result of all these activities can be inferred by comparing the gross home premium income of Australian companies with their total net premium income (less all reinsurances) according to their revenue accounts.

The home gross premium income of the Australian companies was in all these years higher than the net premium income from their total home and foreign business, and, therefore, the difference clearly represents the ultimate balance between their gross foreign premium income and their total reinsurance transactions with foreign companies.

In the Australian Balance of Payments the overseas fire, marine and general insurance company earnings are identical with their operational results, as stated in the above table. As, however, the premiums in that table represent premiums received in a given year in contrast to premiums earned, the balances have to be adjusted to an earned basis. Providing 40 per cent. of the premium increase for this adjustment, the earnings of foreign companies were in 1946-47

* Claims or losses (including provision for outstanding claims) incurred in the year; contributions to fire brigades, commission and agents' charges and expenses of management; taxes (income tax, pay-roll tax), licence fees, stamp duties, etc.

TABLE III

Premium Incomes of Australian Registered Non-life Insurance Companies.

(£A millions)

Gross Australian Premiums	Net Premium Income in Australia and Abroad[1]		Government Offices[3]	Total	Difference (1 - 5)
	Purely Australian Companies	British-controlled Australian Companies[2]			
1	2	3	4	5	6
1939-1940 . 8·00	3·34	1·18	1·82	6·34	1·66
1946-1947 . 11·87	5·22	1·70	2·30	9·22	2·65
1947-1948 . 14·64	7·02	2·01	3·40	12·43	2·21
1948-1949 . 17·69	8·32	2·28	4·49	15·09	2·60

£A 2 m., in 1947-48 £A 1·25 m., in 1948-49 £A 2·50 m., and in 1949-50 nearly £A 5 m. These earnings are nearly all payable to companies incorporated in the United Kingdom.

To these indebtednesses have to be added the profits of the home companies controlled by overseas firms, practically all U.K. companies, amounting on the average to about £A ¼ m., and the net debit balance of all underwriting and reinsurance transactions of the Australian companies abroad, probably of the order of a further £A ¼ m. annually.

The most intractable part of the estimate relates to marine insurance on imports and exports. In Australia's balance of payments insurance payments on Australian imports are shown as a debit item and Australian earnings on both exports and imports as a credit item. However, as most Australian imports are paid on a c.i.f. basis, while most of her exports are on an f.o.b. basis, the credit items are probably small. Because of the paucity of the available statistics in Australia, marine insurance on imports was estimated on a schedule of marine and war risk insurance rates between various countries and Australia applied to the f.o.b. value of the imports which actually arrived in Australia. The assumption is being made that where claims have been paid to Australian importers, these claims have cancelled payments made by the Australian importers to the overseas exporters,

1. Gross premiums less all reinsurances.
2. Australian Alliance; Australian Mutual Fire; Australian National; City Mutual Fire; Colonial Mutual Fire; Commercial of Australia; Derwent and Tamar; Farmers and Settlers; Federal Mutual; Insurance Office of Australia; Master Builders; Melbourne Fire; Real Australia; Southern Union; Sydney Fire Office; Tasmania; Mutual Fire and General.
3. There are six Australian State Government insurance offices. The Government Insurance Office of N.S.W. (1926) and the State Government Insurance Office of Queensland (1915) are composite offices, transacting life and non-life insurances, the Tasmanian Government Insurance Office (1919) transacts all lines of non-life insurance, while the State Accident Insurance Office of Victoria (1914), the State Motor Car Insurance Office of Victoria (1941), and the Western Australian State Government Insurance Office (1938) are operating in compulsory insurances (workers' compensation, motor vehicle) only. All offices are operating on a competitive basis, except the Queensland office in workers' compensation, in which it has a State monopoly, and the Tasmanian office in hail insurance, which is compulsory in the State.

it being acknowledged that "this treatment is not particularly satisfactory, but it affords the best approximation available from present statistics". On this basis the net debit for marine insurance on imports (assumed payments, less insurance on imports paid to Commonwealth War Risk Insurance Board) amounted to: £A 0·4 m. in 1936-37; £A 0·5 m. in 1937-38; £A 0·5 m. in 1938-39; £A 5·5 m. in 1939-40; £A 8·7 m. in 1940-41; £A 11.7 m. in 1941-42; £A 13.6 m. in 1942-43; £A 8.1 m. in 1943-44; £A 3.6 m. in 1944-45; £A 0.9 m. in 1945-46; £A 1.4 m. in 1946-47; £A 2.4 m. in 1947-48; £A 2.9 m. in 1948-49; and £A 3·8 m. in 1949-50.* These are apparently gross estimates and about half the amounts may represent the net cost of insurances on imports, say about £A 1½ m. on the average of the last years.

The life insurance scene in the Commonwealth presents a very different picture from that of non-life insurance. No Australian life insurance company is controlled by overseas concerns, and there are only two overseas companies (the Prudential of London and the Provident of N.Z.) operating in life insurance in Australia. Their business is relatively insignificant (about 2 per cent. of the total Australian business), while the foreign business of the Australian companies is comparatively very large.

TABLE IV

Life Insurance Premiums (Ordinary and Industrial Combined).

(£A millions)

	In Australia (home and overseas offices)	Australian Companies abroad	Total
1938-39	19·35	8·68	28·03
1939-40	20·44	8·99	29·43
1940-41	21·47	9·26	30·73
1941-42	22·52	9·37	31·89
1942-43	23·53	9·61	33·14
1943-44	24·83	10·10	34·93
1944-45	26·79	10·80	37·59
1945-46	29·33	11·60	40·93
1946-47	32·20	12·61	44·81
1947-48	35·65	13·81	49·46
1948-49	40·80	15·12	55·92

No official attempt has been made in recent years to estimate the effect of international life insurance transactions on the Balance of Payments. Although the overseas premium income of the Australian companies is large, while the Australian premium income of the overseas companies is small, the net effect of these transactions cannot be substantial owing to the altogether different nature of the

* For earlier estimates see: G. L. Wood, *Borrowing and Business in Australia*, 1930, pp. 149 and 205.

life business as compared with the business in the non-life lines. The result is, however, undoubtedly in favour of Australia, and may be to the order of between £A ¼ m. and £A ½ m. per annum.

Summing up, the situation in the last three years appears to have been as follows:—Debit from underwriting transactions of foreign insurers in Australia, £A 2 m. + debit from subsidiary offices, £A ¼ m. + debit from international insurance and reinsurance transactions of the local companies, £A ¼ m. + debit from marine insurance on imports, £A 1½ m. less credit from international life insurance transactions, £A ½ m. = net debit of £A 3½ m. annually. The further indebtedness arising from the increasing value of the Australian business of the overseas companies and their subsidiaries, built up from Australian resources, would be difficult to evaluate, but it certainly represents a very considerable amount.

S. J. LENGYEL.

London.

Sources: Commonwealth Bureau of Census and Statistics: *Finance Bulletin.* The Australian Balance of Payments, 1928-29 to 1948-49. Canberra, 1950.

THE SIZE OF TOWNS

New Zealand's 1951 population census results show a continuation of the northward trend that has been in existence since the late sixties of the last century; also of the ever present trend (shared with so many other countries) for most towns to progress in population while all but a few favoured counties (mostly in the dairying districts or near large centres of population) have retrogressed.[1]

The 1951 census also perpetuates certain features as regards the size of towns, which are by no means universal phenomena, but in connection with which certain resemblances between the New Zealand and the Australian conditions are discernible. Both countries, in fact, differ markedly from most countries of the Western Hemisphere in this respect. The main purpose of this article is to describe (and to attempt a partial explanation of) these peculiarities in the hope that someone with a fuller knowledge of the Australian scene than the present writer possesses may be interested enough to offer further comment.

The frequency distribution for the size of towns in New Zealand is quadrimodal in that frequencies are nil over the large range, 11,847 to 18,777; again from 34,000 to 95,000; yet again over the large range 95,000 to 175,000. There is a similar tendency in Australia (excluding

1. In 1951 only 32.2 per cent. of the Dominion's population was in the South Island compared with 63.7 per cent. in 1867, at the height of the gold-rushes. (See pp. 20-22 of the writer's *Guide to N.Z. Official Statistics*, for a fuller treatment of the New Zealand scene in these respects.)

Tasmania, where the small size of the island more or less fixes the sizes of the major towns) towards a single frequency from 47,000 to 135,000, and only one frequency from 135,000 to 310,000. The larger size[2] of the Continent doubtless accounts for the differences between its figures and those for New Zealand. This fact seems to suggest that there is something in New Zealand's economy militating against towns much exceeding 30,000, save under exceptional circumstances, the corresponding figure in Australia being, however, 45,000. There are similarly interesting features in the Canadian figures, e.g. no town between 105,000 and 150,000.

These interesting data call for some further analysis of the circumstances determining the size of towns. There is a nil frequency for the range 5,810 to 8,124 in New Zealand, except for Blenheim (7,045), which is now rapidly moving into a higher class following the quite recent completion of the railway from Christchurch and the development of an airport close to Blenheim.

Figures given in the Australian Commonwealth Year Book suggest that the conditions bearing on the optimum size of towns in the second rank vary somewhat with each State; Queensland, for instance, has three towns round about 34,000 in population; while New South Wales has fourteen towns between 11,000 and 15,000 in population, not including Canberra.

It is only in Tasmania that the second town has anywhere nearly half the population of the State capital. The fraction is approximately one-twelfth in Queensland, New South Wales and Western Australia, one twenty-seventh in Victoria, and one thirty-sixth in South Australia (Port Pirie). Each of the four first-mentioned States was, of course, to some extent settled and developed through more than one port.

Generally speaking, in New Zealand the optimum size would appear to be somewhat higher in the North Island than in the South; which is doubtless not unconnected with the fact that 68 per cent. of the total population of New Zealand now resides in the North Island.

The following data relating to males recorded at the 1945 census indicate how far certain occupations are more or less confined to the urban areas, if not to the main centres:

(a) Of 553 employees in trade unions and chambers of commerce, 470 were recorded in the fourteen urban areas, and no fewer than 399 were in the four main centres.

(b) Of 1,246 employees in warehouses, 1,196 were recorded in the urban areas, of whom 1,114 were in the main centres.

2. Population is also a factor: at the 1951 census there were only 1.94 million people in New Zealand, but the two million mark should be reached in 1952.

(c) Of 2,859 tramway employees, 2,815 were recorded in the urban areas, of whom 2,359 were recorded in the main centres. The difference of forty-four can be simply explained through the absence of certain tramway employees from home on holiday at census date.

(d) There are equally striking figures showing a similar story as regards travel agents, advertising agents, and numerous other occupations, especially appropriate in the larger towns.

The growth of large cities has been rendered possible only by increased division of labour and specialization of occupations. The industrial revolution (and the improvements in transport associated with it) gave great impetus to urbanization because it provided substantial economies of scale not only as regards the manufacturing industries which are typical of most cities, but also as regards the city itself as an administrative unit.

But there are limits to the size of a city, set by the onset of diminishing returns after the optimum size has been passed. An urban economy is in danger of having its growth arrested at the point where its necessary requirements absorb all the surplus food supply of the surrounding countryside, plus what can be imported in exchange for the export of the surplus products of that countryside. Historically, because of continued improvements in the arts of farm production, etc., our surpluses have been ever-increasing ones; and, so long as the social usefulness of concentration of population in a city continues to overbalance the costs (social, human and financial) of such concentration, the city will continue to grow. The development of electricity and improvements in the technique of transport have somewhat reduced those costs, but in many places these developments have not been fully exploited; e.g. there are only three suburban railways electrified so far in New Zealand; two at Wellington, one at Christchurch, and none at Auckland, despite the fact that Auckland is at once the largest and most rapidly-growing of the New Zealand centres of population. On the whole, however, these costs of concentration have continued to increase steadily in New Zealand, through various causes:

(a) The time and money people spend in daily travel to and from work.

The 1945 New Zealand census schedule contained a question re travelling times to and from work which did not appear in any other census schedule, either prior to or subsequent to 1945. Travelling times to and from work (one way only) for the male population were:

TABLE I

Number of Persons Travelling to Work (time taken)

Minutes	Auckland	Wellington	Christchurch	Dunedin	Ten Other Urban Areas	Rest of N.Z.	Totals
Over 90	129	45	26	5	37	567	809
Over 60	1,486	697	188	66	146	2,289	4,872
Over 50	5,300	2,741	881	351	551	5,871	15,695

In studying this table it must not be overlooked that certain occupations requiring much travelling time between home and work are essentially rural occupations; viz. rabbiting, mustering, farm tractor driving, coal mining, etc. High travelling times for school teachers are presumably accounted for by the growing tendency towards consolidation in the country, where many teachers live in a remote spot and drive a bus-load of children into the nearest school every school day, and also by the extra leisure school teachers living in the towns have as compared with other town workers to travel from a home in a congenial locality, but remote from their work.

The high figures for Auckland (and to a lesser degree Wellington) are partly associated with the housing shortage which developed during World War II on a much more acute scale than in other centres. Furthermore, railway services permit people to live within the urban areas and to work well outside them much more than elsewhere.[3] The high figure for Auckland is further contributed to by the existence of frequent ferry services on Waitemata Harbour, fed by omnibuses, without counterpart elsewhere in the Dominion. With the important exceptions noted in the last paragraph, the sheer size of towns may be expected to increase travelling times to and from work; to that extent differences between the figures for each of the four main centres are a measure of the extent of urbanization in each case.

Amongst the "ten other" urban areas the number of people taking more than 50 minutes each way was 83 for Hamilton, 22 for Gisborne, 27 for New Plymouth, 52 for Wanganui, 73 for Napier, 57 for Hastings, 50 for Palmerston North, 19 for Nelson, 21 for Timaru, and 146 for Invercargill. The high figure for Invercargill is attributable to the existence of suitable trains enabling residents to work at the Port of Bluff, 17 miles away. The high figures for Hamilton, Napier and Hastings are explained by the existence of numerous towns within a 30-mile radius accessible by omnibus and where em-

3. At Auckland, suitable railway services run 28 miles north-west and 20 miles south; at Wellington, 26 miles north-west and 20 miles north-east; at Christchurch 20 miles north, 18 miles south, and 7 miles east; at Dunedin 9 miles north-east and 10 miles south-west.

ployment is readily available; the same being true to a lesser degree for Palmerston North and Wanganui; but for no other urban area.[4]

(b) The prohibitive cost after a certain point of obtaining a good and adequate water supply for many large cities. Fortunately New Zealand's four largest centres have fairly heavy rainfalls, and that with the lowest rainfall (Christchurch)[5] is in the happy position of being able to tap artesian water supplies.

(c) The wider area over which milk and other foodstuffs have to be collected.

(d) The longer times consumed in the delivery of goods, the making of salesmen's calls and performing other work, the essence of which is that frequent calls have to be made from place to place. These difficulties are accentuated by the fact that parking space is apt to be difficult to find in a large city in a country which has one motor vehicle to every five of population.

(e) The congestion of motor traffic and pedestrians in the main street during business hours. As a remedy for this the Auckland City Council by-laws no longer permit structures to be built as high as many existing structures in the same street, and well over a quarter of a century ago that council built Anzac Avenue and Grafton Gully bridge as a new arterial route to the south-east. Many New Zealand cities have in the past built pedestrian subways or overbridges where railways pass through the heart of the city. These measures are costly, and to stagger the hours of work, as between different occupations would cause much inconvenience if the principle were much further extended in New Zealand.

(f) High rents and land values, leading to higher costs of living, which in turn means increased costs of production, and therefore impaired competitive conditions for the entrepreneurs concerned. Sometimes this problem can be tackled by moving establishments to a small centre, or to a suburb.

(g) Lowered efficiency of labour, higher morbidity rates and higher mortality rates, as a result either of excessive travelling time to or from work, or as a result of living under unhealthy slum conditions. This problem is probably less serious in New Zealand than in the older industrial

4. At census date there was much building in progress between Palmerston North and Wanganui, and these are occupations where travelling times are necessarily high. (1945 Census Results, Vol. IX, Pages 24, 25, 68, 88, 90.)

5. See J. P. Morrison, *Evolution of a City*, Pages 26, 51-56, 98.

countries, owing in part to the high standards of the Dominion's health services (which lead to the lowest rate of infant mortality in the world); also the highly satisfactory social security schemes placing medical attention within the reach of virtually all.

In favour of the large town, however, it should never be overlooked that it affords broader and more expansive opportunities for intellectual activities than the small town, and that the city-dweller is likely to be broadminded rather than parochial.

Many young people on leaving post-primary schools in the towns smaller than the main centres, go to reside with relatives or friends in the nearest main centre, in the hope—frequently realized at the expense of higher living costs than they would have had to meet in their home town—of finding a wider range of well-paid occupations than were available near home. The main centres also offer (by the sheer weight of their extra numbers) a wider range of matrimonial opportunities (for people of both sexes) than do the smaller towns.

The main centres not only offer superior educational advantages, but also superior recreational and amusement advantages. Thus, very few towns smaller than the main centres offer daily five o'clock cinematograph screenings in addition to the eight o'clock sessions.

In connection with the economies of large-scale operation of local authorities as such, writers on the subject appear to be unanimous that the population which represents the optimum size from one standpoint seldom represents the optimum size from another standpoint. For instance, the point beyond which it does not pay to expand a town is different for library services from what it is for water supply, different again for other civil engineering work, and so on; much depending on climate, topography, transport facilities, etc., and not a little on personalities.

The factors listed on pages 83 to 85 by no means completely cover the influences making for large towns or the factors acting as brakes on the expansion of towns. As a *producer* a person seeks to live as near to his place of employment as possible, at the *source* of the single raw material if the industry uses only one, at an appropriate junction-point if using several materials requiring to be drawn from different places. As a *consumer* he tends to live as close as possible to the point of production of the articles used, so as to minimise the costs of transporting to him his share of the finished goods from the labours of the community of which he is a member. Thus we have forces of *diversification* tending to move people to numerous raw material locations; and acting in opposition to these we have forces of *unification* tending to move materials to one large centre of population.

The forces of unification are strengthened by decreases in costs of transporting goods to consumers, and the forces of diversification by increases in costs of transportation. The same is true of unit labour costs of production; if these decrease the forces of unification are strengthened, and if they increase it is the forces of diversification that are strengthened.

If we denote by p the ratio of the forces of unification to the forces of diversification in a country, if r is the number of centres of population in that country ranked in descending order of population, and if q is the reciprocal of p, then J. P. Zipf[6] shows that rp^q represents the order of the decreasing population size of the country's main cities, given that P is the population of the largest town, so that the populations of the country's towns descend as a generalized harmonic series:

$\frac{P}{1^p}, \frac{P}{2^p}, \frac{P}{3^p}, \ldots\ldots\ldots, \frac{P}{n^p}$; and that the total population of the country equals the sum of these terms. Thus, for U.S.A. the largest town has a population of 10 millions; so that $\log P = 7$.

The fact that Dr. Zipf's graph for U.S.A. (on double logarithmic scale) is so nearly straight, with a slope of just under 1 (so that $p = q = 1$, approximately) suggests that for U.S.A. the forces of unification and diversification very nearly balance each other for all population sizes.

Dr. Zipf's graph for the United Kingdom closely resembles that for U.S.A., with the differences that fewer towns are involved and that London appears too large in proportion to other U.K. cities; a fact which is easily explainable by London's position as the premier city of a system (based on financial institutions, oversea trade and the possession of special skills) that includes much more than the British Commonwealth, *a fortiori* than U.K. alone.

The peculiar Australian and New Zealand distributions of population sizes are explicable in terms of the Zipf analysis if the forces of unification in those countries are particularly active at certain ranges of population size, and the forces of diversification at others, so that the values of p (and q) vary according to the size of the town. It is common knowledge in New Zealand that, in respect of import trade, university education, and in numerous other ways, the four main centres have, as a result of historical accident, fortified by custom and law in many cases, acquired a virtual oligopoly of providing certain services for the whole Dominion. This has given them

6. *Human Behaviour*, Chap. I and pp. 375, 434-444, etc. A small proportion of the generalizations in Zipf's book in other fields is clearly inapplicable to New Zealand conditions, and the present author's support of Zipf's thesis on the sizes of towns does not extend to complete endorsement in every detail of this valuable and stimulating book.

substantial advantages over the remaining towns of New Zealand, and these advantages are likely to remain for many years to come.

It is abundantly clear that, with present facilities for production and transport, the interplay of forces making for diversification and of those making for unification, favours the existence alongside the four main centres (which, by the bye, are progressively smaller as one travels south in New Zealand) of ten additional urban areas, all with very similar populations. The secondary centres with the largest numbers of branches of government departments and business houses and other similar advantages are the most likely to move in due course into the ranks of the urban areas.

That the number of secondary urban areas is not permanently fixed at ten is suggested by the emergence of both Hastings and Hamilton to urban area rank over the past quarter century; precisely where the conditions were propitious for such emergence with the development of the fruit growing potentialities of the Heretaunga Plains, and surrounding areas, in the one case, and with the development of modern dairying technique in the "Waikato" in the other case.

When the full effects of the recent linking of the Buller district by rail with its island's main system are fully worked out, it may be confidently predicted that the present eight secondary centres will become nine through the inclusion of Westport; and the same tendencies are doubtless at the same time working themselves out in other parts of the Dominion, notably in the eastern Bay of Plenty area.

It is significant of the lead of the four main centres over the other towns, that the *absolute* increase of Dunedin (the smallest and least rapidly growing of the main centres) during the past six years was nearly double that of Hamilton (the largest and most rapidly growing of the remaining ten urban areas); so that it will take little less than an earthquake, a revolution, or the invasion of a hostile army to disturb seriously the present primacy of the four main centres.

E. P. NEALE.

Auckland.

REPORT OF TAXATION COMMITTEE, NEW ZEALAND, 1951*

The Taxation Committee was given the following order of reference:—

Inquire into the present system of land and income taxation in New Zealand in all its aspects, and, having regard to the proposed consolidation of land and income tax and social security charge legislation, to report on—

* Paper B3, appendix to the Journals of the House of Representatives.

(a) What alterations are considered necessary or desirable;
(b) The relation of taxation to the national economy;
(c) The effect of any proposed alterations on the national economy, the rates of tax and the total yield of land tax, income tax or social security tax, respectively. The above matters are dealt with mainly in parts 3 and 6 of the report.

Part 3, which is entitled "The Relation of Taxation to the National Economy", deals, among other things, with avoidance and evasion of taxation, the relation of taxation to production, the effect of income tax on costs and prices, taxation as an inflationary pressure and erosion of capital. With regard to the effect of taxation on production, the general conclusion is that "taxation shares so substantially in the rewards of production that the extent and weight of such sharing can and does operate in many directions as a deterrent". Since this is a conclusion which cannot be derived from economic theory alone, it is regrettable that the committee did not produce empirical evidence of the directions in which and the extent to which production is affected by taxation. Taxation was held to be an inflationary influence because of its effect on demand (the familiar multiplier effect of taxation which is fully spent by the government), because it discourages production and because it encourages the use of bank overdrafts (interest on which is an allowable expense) rather than, say, the raising of extra share capital.

Part 6 of the report is concerned with recommendations, and, probably the most important matter dealt with is company taxation. On the general method of assessment of tax on the company and its shareholders, the committee was equally divided. Half of the members recommended that the present system of graduated company tax be abolished and replaced by a system whereby dividends would be assessable in the hands of shareholders and companies would be taxed at a flat rate. The members of this group reported that "the main objective of the proposals is to place companies in a position to save and 'plough back' a greater proportion of earnings than at present". The opposing group, which favoured the retention of the present system, argued that the adoption of the dual system would not of itself result in increased company savings, since it would result in pressure from shareholders for increased dividends to offset their increased liability for income tax. This group opposed the dual system mainly because of injustices which would be inflicted upon investors who had acquired shares on the faith of the existing law. Both groups admitted the inequity of the present system under which taxation rates are not related to the incomes of individual investors.

However, neither group makes any reference to the important economic argument against the present system, i.e. that it discriminates against the larger, and, perhaps, more efficient company. In a majority report of the committee it is recommended that "if dividends continue to be classed as 'non-assessable' income in shareholders' hands, the 'A + B' system be abolished and dividends should be included in assessments only for the purpose of arriving at an average rate of tax in line with the procedure observed from 1931 to 1941". The committee recommends also that bonus shares arising out of the incorporation of capital profits as part of a company's capital shall not be treated as income in the hands of shareholders concerned.

Other recommendations in Part 6 of the report are the abolition of land tax, which is considered to be indefensible in principle, increased personal and family exemptions, exemption of the capital portion of annuities, and the carrying forward of losses without time limit. On the question of aggregation of the incomes of husband and wife the committee was divided. Recommendations in connection with depreciation were:—

(i) "That in place of the present initial depreciation allowances and schedule of rates laid down by the Commissioner in respect of plant, machinery, equipment and fittings, taxpayers shall be entitled at their discretion to allowances for depreciation at rates up to a maximum of 20 per cent. per annum on the diminishing value of such assets",

(ii) "the continuance of special and initial depreciation allowances without time limit in respect of new buildings, and alterations and extensions thereto".

Schemes involving the revaluation of assets were considered to be impracticable.

On such important issues as company taxation and depreciation the committee's report was disappointing. It, nevertheless, contains recommendations which should lead to the removal of a number of anomalies.

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NOTE

A Note to Contributors:—The Editor wishes to call the attention of all those who are proposing to submit material for publication in *The Economic Record* to the conditions regarding length, which are stated on the back cover of the present issue.

It frequently happens that contributions received are two or three times as long as the maximum permissible, and it then becomes a question of cutting by either the Editor or the author, with the result that a contribution, otherwise acceptable, may not appear in the issue for which it was intended. The Editor, therefore, desires to impress on contributors the need to observe the limits laid down for articles, notes and reviews, respectively. This will greatly assist him and lessen the possibility of rejection or postponement of publication of material submitted.

REVIEWS

What Happens During Business Cycles. By Wesley C. Mitchell. (The National Bureau of Economic Research, New York, 1951.) Pp. xxxi + 386. $5.

This, most unfortunately, is the last work of the great economist who, more than any other, initiated and directed thorough research into the facts about business cycles. Planned as a progress report of more than twenty years' research by himself and his associates at the National Bureau, it was left less than half completed by his death. Nevertheless, as Burns, his editor, says, "no existing publication elucidates so fully and authoritatively what happens during business cycles as Mitchell's fragment".

Part I, devoted to "aims, methods and materials", sets out Mitchell's working definition of business cycles and describes his techniques of measurement along with the Bureau's sample of 794 monthly or quarterly series for the United States. These matters were dealt with much more fully in *Measuring Business Cycles*, but are recapitulated here in order to make this book self-contained.

Part II discusses the cyclical behaviour of the series comprising the sample as revealed by the techniques. There are some really invaluable tables here, and the findings are numerous and interesting, as the following rough selection indicates. Nearly 11 per cent. of the series show irregular timing, most of them related to farming or to public construction, but the monetary gold stock is among them. Genuinely inverted timing is shown by a number of inferior goods (e.g. sheep and hog slaughtering, wheat and potatoes), by series relating to goods whose demand fluctuates more than their supply (e.g. cotton exports and buttter production), and by banking reserves. Among the 80 per cent. of series showing "positive" or "neutral" timing, the largest leads over reference cycle turning points are shown by new orders and contracts for investment, and by banking deposits and investments. The longest lags are shown by bond yields and sales, by wages, and by banking reserves. About 20 per cent. of the sample series conform perfectly to reference cycles. The lowest conformity indexes relate to the irregular series just mentioned, and the highest to indexes of activity, to payrolls and hours of work. Production conforms more than prices, employment more than production, and luxury goods more than staples. Amplitudes are extremely variable, and Mitchell presents a careful analysis of the factors affecting the variability of consumers' purchases, producers' purchases, land dealings, employment and wages, fixed and working capital, savings and capital formation, and prices and production. This part concludes with a largely technical, but not

difficult, analysis of cycle-by-cycle variability in cyclical behaviour; one of the main findings is that unless random influences are sudden, large, and so easy to identify and make allowance for, they do even out remarkably well under the averaging processes involved in Mitchell's techniques.

Part III is likely to command the most general interest, because it provides a sketch of the working of a typical American business cycle; this should be read in conjunction with Burns's helpful introduction. But Mitchell had made this sketch on the basis of some 35 comprehensive series, and the reader must do his own checking to see how far these provisional results agree with those reached in Part II on the basis of the wider sample; my own impression is that the agreement is fairly close. To summarize quite baldly, and in a way which does little justice to Mitchell's rich analysis, the typical American cycle has these main features:

(a) The stages of revival and recession show the greatest concordance of different economic activities, but this concordance decreases in later stages of expansion and contraction, and becomes especially weak in the last stage of contraction;

(b) Expansion is most rapid during its first stage and then slackens at an uneven rate; contraction, however, is most rapid just before its middle point and then slackens off to the most slowly changing phase of the cycle—recovery;

(c) The first comprehensive series to show either recovery or recession are connected with bond sales or prices, business failures, early investment activity, deposits and banking activity.

All this will indicate that Mitchell's book, like his others, is indispensable for any serious student of business cycles. But it is tantalisingly incomplete, and we must hope that Burns, or some other collaborator will finish the story. We may also hope that the Bureau will provide us with a picture of the typical cycle in some other country, and preferably in one which is a much more open economy than the United States.

C. G. F. SIMKIN.

Business Cycles and National Income. By Alvin H. Hansen (Allen and Unwin, London, for W. W. Norton, N.Y.). Pp. xv + 639. 55/- stg.

It need hardly be said that this book has many excellent features. The summary of relevant United States statistics in the first five chapters provides an admirable introduction to the later theoretical

treatment of the problem of business cycles. All students and most lecturers will welcome the condensed, but lucid, account of the main determinants of national income to be found in chapters 9, 10 and 11. On these matters, Professor Hansen is now a most accomplished expositor, and his exposition may even have gained from the need for brevity. His treatment later in the book of such vexed questions as "Oscillation and Growth" (chapter 23) and the choice of an appropriate public policy (chapters 25 to 31) is always mature and well informed, though no doubt many of his professional readers will find good reason to disagree with him on matters of principle.

Without in any way deprecating Professor Hansen's powers of persuasive exposition, this reviewer would like to draw attention particularly to chapter 22, in which Dr. R. M. Goodwin has provided an almost perfectly comprehensible account of recent work by econometricians in the field of business cycle research. Dr. Goodwin's account is made easier to understand by his extensive use of the important analogy of "feed-back" systems in various engineering applications, of which the speed governor and the thermostat are probably the best known. He also makes clear the important distinction between oscillations due to lagged relationships and those associated with differential rates of change. This chapter is to be recommend to non-mathematicians anxious to find out the meaning of recent mathematical developments in this field. One can only regret that "mathematical complications" have prevented Dr. Goodwin from attempting a parallel translation of the "very rapid and technically involved elaboration of statistical methodology" which is at present occupying the attention of many econometricians.

A central section of the book (chapters 13 to 20) is devoted to a historical review of the evolution of business cycle theory. Professor Hansen has very sensibly concentrated upon a relatively few leading economists, whose work is treated according to the aspect (such as "the role of investment", "impulse and propagation", etc.) in which they are believed to have made the greatest positive contribution. It is to be hoped that students can be persuaded to use these chapters as a guide to the original works, and discouraged from recapitulating Professor Hansen's all too brief assessments. Whatever may be thought of Marshall's well-known remark in regard to mathematics, it seems particularly applicable to studies in the development of economic ideas.

G. G. FIRTH.

The Levelling of Incomes Since 1938. By Dudley Seers (Oxford, Basil Blackwell). Pp. 74. 5/- stg.

The Oxford Institute of Statistics is a comparatively recent addition to the University and became rather well known through its

association with some of the naively optimistic proposals of Lord Beveridge's *Full Employment in a Free Society*. During the last decade, while the Institute has shed some of its extravagances, the young statistician from New Zealand, Mr. Dudley Seers, has been increasingly coming into prominence as one of its spokesmen. While one is not bound to agree with all Mr. Seers's proposals on taxation, subsidies, and other current political issues in present day Britain, one recognizes in him that combination of rigid integrity and technical ingenuity which make a trustworthy statistician. Any statistical result obtained by him can be accepted as entirely reliable.

A large part of this book is addressed to technical statisticians, who will find it extremely important; but the last essay is definitely addressed to the general reader in economics. Since 1938 the distribution of incomes in Britain has become much more equal, but it has not yet reached antipodean or Scandinavian standards of equality. I differ from Mr. Seers in estimating the extent of the rise of real output since 1938; but we agree in concluding that it has been largely, if not entirely, absorbed by "the commitments of the economy to produce higher exports, more social services, more arms, more investment . . . higher real incomes for the agricultural community and coal miners". Therefore, as Mr. Seers puts it quite plainly, "I am not suggesting that people *should* have the same real incomes as pre-war".

Between 1938 and 1949 the real income of the average wage earner rose by 20 per cent., and of the average farmer by 91 per cent.,* while the real income of the average professional man fell by 11 per cent., and of the average salaried man, trader or member of the Forces, by 18 per cent.

Mr. Seers makes out an excellent case for replacing, as soon as we can, our old friend the Pareto co-efficient by the Gini index of concentration. The former, he shows, is far too sensitive to small changes in the numbers of people at the highest income level, and is difficult to handle in other ways. The Gini index is very suitable for measuring income distribution after tax as well as before tax, and it is hoped that its use will be extended and brought into the field of international comparisons, numerous though the difficulties be.

COLIN CLARK.

Studies in Income and Wealth. Vol. XIII. Conference on Research in Income and Wealth. (National Bureau of Economic Research, New York, 1951.) Pp. xiv + 587. $6.00.

The thirteenth volume of papers prepared for the Conference on Research in Income and Wealth might best be described as a guide

*It is curious that Britain adopts exactly the factor of change in the terms of trade proposed in *The Economics of 1960*, when she is dealing with her own farmers; but not when she is dealing with the rest of the world.

to traps in national income analysis. Although it takes as it theme the size distribution of income, its main contribution is to the concept of aggregate personal income, to the technique of income and expenditure sampling and to the degree of confidence which one can place in standard statistics, such as those of income tax, of national insurance and of income receiving population.

It is clear from the volume that the vast efforts of United States statisticians have not yet succeeded in producing anything which could be described as a size distribution of income with errors small enough to make it even a rough guide to policy. Nonetheless, the four of the ten papers in the volume which describe actual attempts to build up size distributions, display the promise of a technique which will lead to meaningful figures in this field, while the six other papers, devoted essentially to an extremely thorough and critical appraisal of available data, show promise of great future methodological improvements.

The volume is distinguished among the volumes of the conference in the general unity of its approach and in the solidity of its contributions. No doubt the credit for this lies with Miss Hildegarde Kneeland, who was responsible for arranging the meeting. But this very unity of approach may be responsible for a most noticeable lack in the contributions—they are all essentially concerned with size distributions from the side of the receiving family rather than from that of the earning individual. The emphasis is on welfare and its distribution rather than on the scatter of returns for performing the various economic functions of the community. This bias may well result from the fact that the basic American income tax data contain many joint returns from husband and wife, while sample survey data also deal naturally with the household.

This welfare approach is probably responsible for much of the fuzziness in the concept of aggregate income in the papers and may also indirectly explain the curious omission of reference to expense and entertainment allowances as an element in non-money income. Inclusion of this item might well have led Miss M. G. Reid to modify her conclusion that "in general non-money income is more equally distributed than money income".

Miss Reid's paper, together with that of Mrs. D. S. Brady on the general concept of personal income in relation to size distribution, and that of Mrs. S. F. Goldsmith on the basic United States data for constructing size distributions, are noteworthy contributions to the theory and practice of national income statistics. Mrs. Brady has demonstrated that the simple concept of personal income is by no means simple, while Mrs. Goldsmith has shown that the errors in estimates of aggregate income derived from sample surveys are so

large as to cast doubt on conclusions drawn about expenditure from such surveys and to destroy any hope of obtaining an adequate size distribution from such sources with present technique.

Estimates of size distribution of income exercise a great fascination for the economic statistician, but, from now on, anyone who is tempted to engage in the exercise will not have the excuse that the pitfalls were not pointed out to him.

H. P. BROWN.

Income Analysis. By R. V. Clemence (Addison-Wesley Press, Inc.). Pp. ix + 182. $2.50.

Professor Clemence has written what is, in most respects, an admirable elementary text on the theory of income determination, as originated by Keynes and developed more explicitly in the works of such writers as Samuelson.

Although the author claims that his exposition is new, the methods employed by him will not be unfamiliar to most teachers of macro-economics. He commences by setting up two model economies—the first a two-sector economy (firms and households), and the second a three-sector one (firms, households and governments). The remainder of the exposition is in terms of these two models. There is no treatment of an open economy. The models are explained realistically and are not too abstract for elementary students to swallow. The circular flow of production and income is then dealt with and national income and allied concepts explained. The theory of income determination then follows with the usual references to the equilibrium level of income, planned and realized savings and investment, the propensity to consume, the multiplier and the accelerator. Reference is made to the interaction of the latter two tools of analysis. The last two chapters deal with cyclical fluctuations and the role of government, and being rather abbreviated are not as satisfactory as the earlier portions of the book. It is of interest to note that Professor Clemence uses neither social accounting techniques nor the now popular 45 degree diagram in his treatment.

My main criticism is that a sufficiently clear distinction between real and money income has not been preserved, and this may result in misleading elementary students. In addition there is some confusion over the income generating propensities of a balanced budget. On page 145 we have "The overall effect of a balanced budget is *neutral*" (author's italics), and five pages later, "The mere expansion of government activities . . . raises the level of National Income, even if the budget is kept balanced all the time. . . ." No reference is made to the balanced budget theorem as such.

Professor Clemence's book has the advantage of being a text on income determination pure and simple with no extraneous matter in it. It is the sort of text which might well be prescribed for elementary courses in macro-economics, and should certainly be examined by teachers of this subject.

P. H. KARMEL.

Income and Wealth (*Series I*). Edited by Erik Lundberg (Bowes & Bowes, Cambridge, 1950). Pp. vii + 297. 30/- stg.

During 1949 the International Association for Research in Income and Wealth held its first conference in Cambridge. From the 23 papers which were prepared, eight were selected for publication in this volume. All the papers are most thought provoking, and one can only regret after reading them that a précis of the discussions which these papers must have stimulated, was not prepared for the reader.

Richard Stone's contribution, "Functions and Criteria of a System of Social Accounting" is the longest and most original. He creates for each of the principal sectors of the economy an articulated system of social accounts—operating, appropriation and resting accounts—which are consistent with the accountant's bookkeeping procedure and the identities of the national income analyst, viz. $Y \equiv C + I$; $C + S \equiv Y$; $I \equiv S$. This system of accounts will be familiar to those who heard Sewell Bray when he lectured in Australia in 1949. The combined operating surpluses of the various sectors give the net national product at factor prices. National income may be calculated with some manipulation from the consolidation of the appropriation accounts of the various sectors. Using the transactions of the British economy in 1948, two sets of accounts are prepared, one with the conventional sectors of enterprises, households, public collective providers and the rest of the world, the other with the additional sectors, labour service and home lending service. The latter separates gross profits from wages and salaries and interest, but requires a rather artificial negative operating surplus in the public collective providers account to prevent interest on consumption loans from being incorporated in the calculation of net national product at factor cost. With the exception of two errors which occur in these accounts on pages 50 and 52, the printing is good.

Four of the papers discuss the recent uses of social accounting in U.S.A. (Colm), France (Marczewski), U.K. (Jackson) and the Netherlands (Strugel). The methods, uses and limitations of model building in U.S.A. and U.K. are discussed by Colm and Jackson, respectively, and the latter gives a frank statement of the defects of the U.K. national accounts.

The final three papers discuss the measurement of real national income. Derksen's paper, "Intertemporal Comparisons of Real National Income" is introductory to this section in that the three common methods of calculating real national income are examined, viz. deflation of national income by an appropriate price index, deflation of expenditure flows by appropriate indices, and the measurement of aggregate output in physical series, labour input, etc. Kuznets' and Reddaway's papers are mainly concerned with the specialized topic of the measurement of the real output of the government sector. They recognize the existence of intermediate goods and services among a government's purchases and the consequent double counting which is introduced with the treatment of these intermediate goods as final goods.

R. R. HIRST.

La Recente Inversione Nella Tendenza Della Natalita. By Bernardo Colombo (Padova, 1951). Pp. viii + 183. L. 1,500.

One of the minor scientific pursuits encouraged by the war was the search by demographers for indices which could explain satisfactorily the apparently extraordinary increase in fertility in many European and overseas countries as revealed in unrefined birth and net reproduction rates. Put very simply, the main focus was upon the fertility performance of different cohorts of married women at specific durations of marriage.

The author of this work proceeds to apply this technique for a comparative study in a selected range of countries for which adequate data are available. These countries he divides into three broad groups; Northern (Sweden, Norway, Denmark and Finland); European Continental (France, Belgium, Netherlands and Switzerland); and English speaking (U.K., U.S.A., Canada, Australia and New Zealand). His primary concern is with the structural origins of the rise in the birth-rate during the war period (1941-'45), since (he adds) the higher birth-rate after the war may be easily explained by the "making up" of births postponed during the war. Dr. Colombo concludes that, for similar marriage durations, (e.g. 0-5, 5-10 years, etc.), the average size of the family did not increase during the war years compared with pre-war. The author shows, however, by a further analysis of Swiss and Australian data (which provide figures of marriage duration in conjunction with previous issue) that for similar durations, and increasingly for higher durations, there was an increase in the maternities of women who had previously born up to four children. He suggests that this provides evidence of a notable increase in the fertility of women who had previously born fewer than five

children, quite independently of a "making up" of postponed children. In fact, just the reverse may be the correct interpretation, and the conclusion to be derived must remain guesswork because the data tell us nothing of the time-interval between successive births.

Dr. Colombo emphasizes that his conclusions are tentative, based as they are upon fragmentary data. But they are stimulating; and his 25 tables in the text and 15 in the appendix (the titles of which carry an English translation) make his book an admirable groundwork for a comparative study of recent trends in fertility. It is doubtful, however, if one can accept his final suggestion that the field of ideas he presents supports the interpretation given by Corrado Gini that the recovery in the birth-rate is a manifestation of the triumph of instincts—aroused by circumstances—over hedonistic reasoning responsible for birth control. Surely this ignores the main point of Dr. Colombo's analysis—the increase in the birth-rate is a reflection primarily of the proportions of the populations under consideration who have been married, and of their marriage duration, and not of any clear evidence of an increase in family size, or of a decrease in the use of birth control practices.

W. D. BORRIE.

Economic Dynamics. By William J. Baumol, with a contribution by Ralph Turvey (The Macmillan Company, New York). Pp. xiii + 262. $5.

Anyone who hoped to find under this title an original essay in economic theory, or a synthetic account of a coherent body of doctrine, or even an authoritative text-book rendering of the existing bits and pieces of "economic dynamics", would be either misled or disappointed. Nevertheless, this should prove one of the most useful economic works of recent years.

The most serious obstacle to the progress of theory in our day is probably the language barrier between mathematical and literary economics. In Mr. Baumol we have at last a mathematical economist who has taken a good deal of trouble to learn our language and who is prepared to teach us his. The rather critical remarks which follow spring, not from ingratitude, but from greediness for instruction.

Chapter one is concerned with the definition and classification of dynamic systems. Economic dynamics is defined as "the study of economic phenomena in relation to preceding and succeeding events". Baumol interprets "events" as "objective events", so excluding Parts III and IV of Hicks' *Value and Capital,* which he prefers to call "statics involving time". In passing, it may be noticed that the definitions given by Hicks, Frisch, Harrod, Samuelson and Baumol all

seem to involve ambiguity as to whether the distinction between "statics" and "dynamics" is based on a different choice of premises regarding the situation to be analysed, or on a different choice of questions which the analysis is intended to answer.

Part I (chapters two, three and four) is entitled *The Magnificent Dynamics.* The classical theory of progress towards the stationary state is presented in a neatly stylised version. The economic development theories of Marx and Schumpeter are run together in an awkward double harness. Finally, there is an exposition of Harrod's "progressive economy" model. This brings out a number of interesting points, but does not come to grips with the important issue of how far Harrod's analysis succeeds (as he maintains) in avoiding "special assumptions about time-lags" and how far on the contrary it requires the very special assumption of zero time-lags.

Part II (chapters five, six and seven) deals with *Statics Involving Time.* The Hicksian equilibrium of the firm is usefully simplified and summarized in a form which brings out clearly how static this analysis is, apart from the purely formal "dating" of inputs, outputs and discounted prices in the subjective planning of the entrepreneur. The relationship between price flexibility and stability is then discussed in chapter six, which is almost entirely potted Lange. Chapter seven deals with the dynamic conditions of stability, chiefly following Samuelson. The relationship between the Samuelson type of stability condition (which concerns the *convergence* or otherwise of a process of adjustment with respect to a defined static equilibrium) and the Lange type of chapter six (which concerns the *existence* or otherwise of the static equilibrium itself) is nowhere stated.* The discussion of dynamic stability conditions is confined to partial equilibrium in isolated markets (the cobweb theorem, and the contrast between the so-called Walrasian and Marshallian types of market adjustment), and throws no light upon the Hicksian conditions of stability in multiple markets, or the criticisms of these by Lange, Samuelson and Metzler.

Part III (chapters eight to twelve) is headed *Process Analysis* and occupies half the book—by far the more important half. Chapter eight, which is chiefly Turvey's contribution, discusses the basic concepts of process analysis in terms of the Swedish literature. The exposition is very clear, but again the concepts are not properly linked up with counterparts with which many readers will be familiar. Thus, in drawing the distinction between the "equilibrium" and the "disequilibrium" methods of process analysis, it is not explained that the

* In fact, Baumol seems to be confused on this point. For example, on page 99 he raises an index number problem which is irrelevant to Lange's argument, although it would be relevant to a Samuelson adjustment process. The second last paragraph on page 106 involves a similar misconception regarding the relevance of "speeds of reaction".

Swedish version of the first does not correspond exactly with the method of the Hicksian "week", nor yet that the Swedish version of the second differs in essential respects from the disequilibrium methods of Lange, Samuelson, Metzler and Klein.

The remaining chapters are devoted to linear difference and differential equations. This is nearly all straight mathematics, but should be invaluable to the economist who wants to keep up with his mathematical colleagues. The explanation assumes practically no mathematical knowledge, and carries the argument far enough to put the reader one jump ahead of the Harrod, Domar and Samuelson models of the interaction of the Multiplier and Acceleration Principle, and right alongside Hicks' *Trade Cycle*. The account of difference equations is, to the best of my knowledge, the only one available which is both strictly elementary and adequate for most economic purposes (within the limits of linearity, the restrictiveness of which is, however, not sufficiently emphasized).

Perhaps the greatest compliment I can pay Baumol is to say that his instruction has emboldened me to ask a more or less mathematical question. Is it really necessary to worry our heads with the complications of "multiple" roots, unity roots (for difference equations) and zero roots (for differential equations), which break the flow of the argument on pages 173-181, 202-204, 228-233, 239 and 245? These cases necessarily involve a certain *exact* relationship amongst the co-efficients of the equations concerned. The latter, in economics, as in physics, "are only approximations to certain empirical expressions and their co-efficients are only known with a certain approximation. Whatever is significant must then remain unchanged when the co-efficients vary slightly".** If the physicist is prepared in practice to dismiss as insignificant the possibility of the curious trend terms which enter the solution in these "queer" cases, cannot the economist follow his example? I raise this query chiefly because it may be that the insistence of the mathematicians on a spurious rigour is one of the reasons for the barrier between literary and mathematical economists, which in other respects this book does so much to remove.

TREVOR SWAN.

Oxford Studies in the Price Mechanism. Edited by T. Wilson and P. W. S. Andrews. (The Clarendon Press, Oxford, 1951.) Pp. xv + 274. 39/6 (Aust'n).

This book deserves a warm welcome, if only because it reprints a number of important articles which appeared in long exhausted editions of *Oxford Economic Papers*. These and the new essays

** *Theory of Oscillations*, by A. A. Andronow and C. E. Chaikin, Princeton University Press, 1949. Page 183.

which also appear here are connected in that they are based upon group or individual research of an empirical kind into the workings of the price mechanism. Most of them upset some aspect or other of recent economic theory.

The first section comprises six essays on the rate of interest. At a time when Keynes was teaching that hardly anything could happen in the economic system except through the rate of interest, an informal research group at Oxford inquired into the effects of interest upon business investment. As is well known, they found that neither the short nor the long rate had much effect upon business. The original article by Meade and Andrews, describing the first inquiry, and that by Andrews describing the second inquiry, are both reproduced here, along with Henderson's interpretation of the results of the first inquiry and Sayers' comments upon those of the second. In between comes Brown's ingenious econometric demonstration that observed relations between idle money, interest and prices may be explained in Keynesian or in Wicksellian terms, and his suggestion that the empirical connection between low interest and high activity might be explained by regarding business investment as sensitive to liquidity, if it is not sensitive to interest.

Sayers has written a brilliant new essay which is much more than a preface to these five reprints. After a valuable account of the growth of scepticism regarding the importance of interest, he points out that before 1930 business expectations were sensitive to changes in interest. In the early 19th century English prosperity depended upon mercantile activity, which responded to Bank Rate; later on prosperity depended upon overseas investment which responded to changes in the money market. Judging by their complaints about dear money, business men were still sensitive to interest rates after World War I, but this may well have been largely a habitual response, explained by the long pre-war association between cheap money and prosperity. The depression shook confidence so badly that there was no longer either a rational or an irrational response of business investment to interest rates; the Oxford inquiries, therefore, may have brought out something quite new in English economic history. As for the future, new developments, such as the spread of hire-purchase finance, may do something to resharpen the blunted sword of interest policy.

Sayers is thus rather more optimistic about interest policy than he used to be, but he might have been more optimistic still if he had considered one aspect of the problem neglected by the Oxford inquiries. Rosa[1] has recently pointed out that one quarter of the

1. *Money, Trade and Economic Growth*, Essays in Honour of John Henry Williams, p. 275.

replies in the second Oxford inquiry indicated that business investment was affected by availability of credit, and points out that long-term issues, at least, have been affected by changes in interest. Nor is it inconceivable that such changes would affect the liquidity of trading banks, and hence their loans to business.

The second section of the book contains two further econometric essays by Brown. The former, reprinted from *O.E.P.*, reaches the conclusions that the sterling-dollar rate can almost certainly reach a position of stable equilibrium, and that a gap of x per cent. in the current balance can be remedied by a depreciation well below 2x per cent. The latter is a new and interesting examination of recent attempts to find numerical values for elasticities of substitution, elasticities of demand, and elasticities of supply for imports and exports. It does not, however, throw further direct light upon the sterling-dollar rate.

We must all be grateful for the reappearance of the famous article by Hall and Hitch, describing and interpreting the research group's findings about the pricing of industrial goods. As is also well known, they found little evidence that output was adjusted to equate marginal revenue and marginal costs, and much evidence that a "full-cost" pricing principle was used. Andrews, who has done much work following up the lines of research suggested by that inquiry, now contributes a new essay urging the reintroduction of industrial analysis in economics. In the course of a stimulating, if sweeping, critique he argues that whereas Marshall reached a sound enough theory of the industry, but failed to develop a theory of the firm, later theorists have developed a false theory of the firm and have virtually abandoned any theory of the industry. But if it is recognized that firms fix prices on the basis of costs and estimates of competition, their behaviour cannot be understood without direct reference to this competition; i.e. to the industry. The difficulties of defining an industry have been exaggerated; the typical customer of a firm is another firm, not a whimsical consumer. In Andrews' opinion there is sense in speaking of the "product of an industry", and in the long run its price will be uniform as between firms. This price, moreover, and hence the industry, can be in equilibrium although no firm is. Although these arguments are open to criticism and rejoinder, they should induce some of us to re-read Marshall and to reconsider the controversy over increasing returns.

The final three essays are also new. Giles makes a useful, if rather rambling and discursive, survey of various aspects of the price mechanism in relation to agriculture. Robinson provides a summary of three earlier articles based upon research by the Oxford Institute of Statistics into the mobility of labour; it is shown that during the

interwar period the mobility of labour in Britain was extremely low, both as between areas and occupations. He follows this up with a most interesting and lively discussion of changes since 1939. Direct controls proved indispensable during the war in order to secure the desired redistribution of labour, and they succeeded in shifting people about to a far greater extent than would ever be required in peace. But since the war mobility has become more sluggish than ever, in spite of the urgent need for a flexible economy. Direct controls have gone, and the Labour Government's attempts to satisfy the passion for security have practically destroyed both incentives to movement and rational allocation of labour.

All in all this book is good value. It will be particularly useful to those who have to teach advanced theory or applied economics.

C. G. F. SIMKIN.

Product Equilibrium Under Monopolistic Competition. By H. Brems (Harvard University Press). Pp. viii + 253. 47/3 ($4.50).

Since Brems' approach to this problem of product equilibrium is a refinement and extension of Chamberlin's, a brief recapitulation of the Chamberlin analysis is in order here.

Chamberlin uses a partial equilibrium approach. He draws a cost curve for each separate differentiation of the product, and, from the demand curve for that particular product, ascertains the amount which can be sold for a series of different prices, together with the profit which may be achieved from those sales. When the results are compared for all possible differentiations, a particular differentiation, and a particular price will be found which produces an overall maximum profit. This final situation then constitutes the equilibrium for both price and product. Selling expenses can be introduced into the analysis to modify these results somewhat; as a rule, extending for each differentiation the possible volume of sales at any particular price, and at the same time increasing the cost of producing *and selling.*

Brems also uses the partial equilibrium approach. He defines the product in terms of its specification; that is to say, its dimensions, shape, colour, material used, etc. He calls these characteristics the *producer's criteria of quality.* Simultaneously, he introduces other variables, which he calls *producer's criteria of selling effort.* These two groups of variables, together with price, constitute the entrepreneurs' *parameters of action,* all of which are considered to be, more or less, under his control. It will be noted that any specific set of parameter values defines a "product" and a "selling campaign". Since ". . . quality itself cannot be measured . . .(but) . . . the cost

involved in changing the quality in a certain way can be measured",* Brems measures the product in revenue units rather than in units of physical quantity, hence he is enabled to vary the nature of the "product", provided he is working with a fixed price per unit of "product". This he does, calculating, for each practicable set of the parameters, and some fixed price, the volume of sales which may be achieved, and the costs of achieving that volume of sales. Since revenue is the product of the volume of sales and the fixed price, it is a by-product of the previous calculation. Thus, the profit for each practicable set of parameters at the fixed price may be ascertained. If the process is reworked for a series of different fixed prices, and all of the results compared, an overall maximum profit situation emerges, defined in terms of a specific set of parameter values, and a particular price.

In so far as the definition of the product is concerned, Brems perhaps gives a better description of the way in which an entrepreneur would recognize his product, but for the purpose of the analysis, is there much difference between Chamberlin, who says—"this is such-and-such a differentiation of the product", and Brems, who says—"this is a product with such-and-such a specification"? It would appear that, ignoring for the moment the selling effort criteria, the methods of Chamberlin and Brems would produce the same results exactly. With Chamberlin, all possible practicable combinations of price and "product" are investigated, and that combination showing the maximum profit is selected. Brems does in effect exactly the same; all practicable combinations of price and producer's criteria (which define the product) are considered, and that combination showing maximum profit is again selected. Although the paths along which the investigation proceeds differ, the results must coincide.

In the case of selling effort, however, Brems has certainly advanced. "One has . . . to remember", he says, "that what sells more units of the product is not money expenditure as such, but money wisely spent" (pp. 13-14). His producer's criteria of selling effort, formally at any rate, define a selling campaign, i.e. define the way in which selling expenses are distributed among the various avenues for influencing potential purchasers. Since there has been some considerable discussion on the difficulty of distinguishing between changes in the quality of the product and selling effort, it seems reasonable that they should be approached in much the same way in the analysis. Brems has thus brought some welcome degree of unity into what had previously been two separate analyses.

* Brems: Interdependence of Quality Variation, Selling Effort and Price. *Q.J.E.*, May, 1948, p. 420.

So far it appears that there has been but a minor advance. However, Brems proceeds to apply his theory to a firm (a) producing a number of products simultaneously, and (b) producing a product over time. Since he is working in terms of revenue produced, rather than physical output, he can aggregate his products in case (a), and discount his expected receipts in case (b). He tackles the problem of uncertainty with the Lange technique of replacing a most probable expected value, together with its range of possible alternatives, by an equivalent certain expected value. This section of the work is extremely interesting as an application of existing techniques, and especially interesting is the way in which Brems has, in case (a), multi-product, avoided the necessity for distributing total costs among the various lines of production. As an offsetting factor, however, there is the multiplicity of possible combinations of criteria and prices, which would make the practicable application of the process far too costly for any entrepreneur to consider.

The final section of the book, and the section to which the work has been building up, applies the theories to the study of duopoly (which Brems is using almost as a synonym for oligopoly, in that he considers his results to apply equally well in either case). The analysis is one in terms of reaction curves, drawn with respect to variations in the parameters. Price, which is one of the parameters, is considered as fixed, on the ground that price competition, which can be quickly met by rivals, is unlikely to occur. This brings out the point, almost a corollary, that competition will be in those directions where the response is slow on purely technical grounds (c.f., Schumpeter and innovations). Time, according to Brems, is thus the essence of duopolistic—and oligopolistic—competition; which implies that some kind of sequence analysis is most appropriate for this study. However, Brems does not proceed to the sequence study, but indicates that it offers an interesting opening for future research.

His final investigation deals with the conditions under which agreement will be reached, whether implicit or explicit, between the duopolist. His results for explicit bargaining appear to be subordinated to the task of providing a basis for his implicit bargaining theory, and as such are not comprehensive, omitting, for example, any consideration of compensations between the duopolist, in order to get both to agree to a position in which both may get greater profits, but which, without the compensation, would not be an agreeable position.

In general, one can say that the book puts forward some very useful questions. Regarding the answers, however, the author admits that no entrepreneur could possibly act in the way described. However, entrepreneurs do act, and it is no doubt true that they base

their actions on the types of criteria suggested by Brems. It is one thing, though, to describe those things which influence the entrepreneur, and another to show how they influence him. Like quite a large part of the theory of the firm, it describes how an entrepreneur *should* act in order to maximise his profits, but not necessarily how he does act, given the information available to him. For one thing, it gives no method by which one may predict what an entrepreneur, even on the average, will do in response to a change in the "given" situation. In fact, this problem has been assumed away. The firm in the analysis is not really a "going" concern, since if it was it would already be producing at the "optimum" corresponding to the situation as given when the current plans were formulated. Hence a change in the production process would come from an alteration in the "givens" of the previous situation. This presupposes, of course, that there is some possible "equilibrium" situation which may be achieved, an assumption which is made implicitly in the book. If the "given" situation does change, there is no way in which the theory relates the new "plan" to the old.

One seems to detect a bias in the theory towards very large firms, which must almost inevitably be in some oligopolistic situation. If this be so, and it seems likely, then the title of the book, including the expression "Monopolistic Competition", is a trfle misleading, since the book deals with the small group of Chamberlin, and, only by implication, and not very practically, with the large group.

C. S. SOPER.

The Role of Measurement in Economics. By Richard Stone (Cambridge University Press, 1951). Pp. 85.

In 1949 Mr. Stone gave the Newmarch Lectures at University College, London, and this book presents them with some additions to a wider circle.

Newmarch would, no doubt, be amazed and delighted by the progress of quantitative work in economics since his day; but the advance has not been made without cost. As the measuring techniques become more elaborate, communication between economists grows more difficult; ever rising barriers separate the economists who converse in the language of mathematics from their fellows and much effort is wasted on both sides. An occasional reminder that the common purpose cannot be achieved either by measurement alone or by theory without measurement does not come amiss. Mr. Stone's book is an excursion into methodology which gives this reminder by way of an examination of the role of measurement.

He distinguishes four types of question in economics requiring a quantitative answer and proceeds to show for each in turn the importance of precise theoretic formulation, the nature and possibilities of the techniques available and the conditions for improving the quality of the answers they produce.

First there are questions of fact addressed to the economic statistician. What for example is the size of the national income or the level of retail prices? Better estimates will involve attention to both economic and statistical design, to precise definition of what is required and at what level of accuracy, and to efficient methods of obtaining this information without bias so that measures of reliability may be given. As an illustration, there is a discussion of some of the problems presented by social accounting—a section of some twenty pages which, quite apart from its value as an example, is a most useful reference on this topic. The structure of a simple set of accounts is derived from Keynesian theory and illustrated by data for the British economy. The discussion of this classification in relation to the accounting structure of business enterprise recalls the suggestion made here recently, by Mr. R. L. Mathews, that our best hope of obtaining data from accounting records is to show the accountant how to provide what we need without sacrificing his own position on such thorny matters as depreciation. Even if it were possible to get information from business records, we would still be far short of accounting for the transactions of all economic entities. For some items, the existing official statistics are up to specification; for the rest, sampling methods now being developed may be the means of reducing guess-work to a tolerable level. Enough evidence is already accumulated to suggest that we should be more venturesome in this country in collecting sample data.

Other aspects of measurement, testing hypotheses, estimating the parameters in economic relationships and prediction are treated in a similar way. Mathematical as well as statistical techniques are required and some sections will discourage the non-mathematical reader, but occasional omissions will not destroy the main thread of the argument. The three examples used, the postulates of the theory of choice, market demand relationships and a simplified savings-investment model are, like the social accounting example, developed at sufficient length to merit specialist discussion beyond the limits of a short review. In the framework of the lectures they serve admirably to reinforce the general argument for a better understanding of the relationship between theory and measurement.

JEAN POLGLAZE.

Psychological Analysis of Economic Behaviour. By George Katona (McGraw-Hill Book Co., Inc., N.Y., 1951). Pp. ix + 347. $5.00.

Katona might well have been tempted to gloss over or excuse the work that has *not* been done in this field. He has carefully avoided doing so. For this and other reasons he has written a useful and stimulating text. The plan of the book is straightforward: there are five parts—Problems and Tools, Consumer Behaviour, Business Behaviour, Economic Fluctuations, Research Methods. This list might be said to be so obvious as to tell us nothing in particular. Its meaning (and the value of Katona's enquiry) appear when we consider how it was arrived at.

Common sense would distinguish consumer and business activity. It would agree that economic fluctuations are a matter of rather urgent importance. But it might confuse the problems, be uncertain about the proper tools for attacking them, and remain in the dark about future research. It is Katona's achievement that he has formulated the problems in terms, *inter alia,* of decision and of group-membership. He has tried to substitute for everyday conjecture a pretty solid social psychology.

The first part of this book (especially the sections "Economics without Psychology" and "Psychology without Economics") ought to be read by anybody concerned with either discipline. Economists will be effectively disabused of any misapprehensions about the kind of psychology available as an instrument for studying economic behaviour. Among economists (and elsewhere), extreme kinds of psychology (whether abstract, recondite or simply vague) have left an awkward hangover. Katona dispels the hangover very thoroughly: he also reminds psychologists (pertinently) that they must study specifically "behaviour of producing, distributing and consuming".

The psychology of this book then centres on attitude and group-membership as explanatory concepts. The methodological background (see Chap. III especially) is admirable. As this reviewer sees it, there is just enough on perception in relation to attitude, on psychological fields, and on frames of reference to get economists really interested in psychology. As a working text, this part of the book could easily start psychologists thinking what elaboration of it could usefully be made, and economists to contributing more detailed reports of e.g. market fluctuations, which might make the psychologists more critical of their own concepts.

Later applications, e.g. identification with one's firm (p. 197), and leadership in price fluctuations (p. 235) are interesting, though more conjectural.

The more specifically economic sections are a trifle depressing, though not through Katona's fault. (He cannot avoid repeated

reports of problems on which enough information is just not available.) The discussion on research is useful in this connection, though perhaps optimistic on action research and on "before-and-after" study techniques.

One might criticise Katona as being rather hard on the psychology of the great economists. A distinction might be made between developing one's own psychology from a knowledge of economic behaviour, and adopting a popular psychology somewhat garbled (as many did with MacDougall's). To this latter fault (which is an ever-present danger) Katona has supplied a corrective. This seems to be a material service both to psychology and to economics.

J. A. CARDNO.

Gesellschaftslenkung und Politik. By Emile Callot (Verlag J. C. B. Mohr (Paul Siebeck), Tübingen, 1950). Pp. 107. (Social Art and Politics, translated by Dr. Julius Sehmidt.)

This is a German translation from the book by the well-known French sociologist, Emile Callot, *Du concept d'art social et de politique.*

Because of the important methodological question whether economics should be neutral between ends or not,[1] the book under review will be of a specific interest to economists. If economists can fight a methodological battle about the question whether it is useful to consider an end for their science (say, what Adam Smith termed "opulence"), then for sociologists such a problem cannot emerge—no definable end has been formulated for all social activities up till now. This fact—the absence of teleology—is the crux of the question whether social technique to influence society can legitimately be elaborated or not. In the opinion of Durkheim (*Règles de la méthode sociologique,* p. 60, et seq.) means must be discussed together with ends. Contrary to this is the approach of Comte, which assumes a perfect ethical system and then discusses the ways of achieving it. The viewpoint of Callot is somewhat similar to that of Comte (p. 29), and twenty-four pages of the book under review are devoted to show why, in the opinion of the author, a "sociotechnique" is practically possible, and can be developed parallel to "sociography" and "sociology". The main thesis of the book is that social science needs both: social ethics and a social technique; the former is undeveloped and probably will remain so, the latter can be developed at once and should not be postponed because of the incomplete status of the first.

1. Cf., for instance, the opinion of L. Robbins, *An Essay on the Nature and Significance of Economic Science* (London, 1940), Chapter II ("Economics is entirely neutral between ends"), and A. Amonn, *Volkswirtschaftliche Grundbegriffe und Grundprobleme* (Bern, 1944), p. 51, and especially Chapter vii ("The first basic problem of economics is, which are the political means to increase the welfare of the nation").

The author gives also some examples of what he proposes to include in "sociotechnique" (p. 90-97): the technique of government and reforms.

The reader of the book might easily become convinced that a social technique is possible, if he already has not learnt that empirically from history and from the study of present political life. Nevertheless, after reading the brilliant arguments in the best of French traditions (which could even not be hidden by the difficulties of translating the book into German), the reader will remain unsatisfied and ask himself, would the service to science not have been greater if the author had applied his knowledge and his investigation to contribute to build up social ethics? In the opinion of the reviewer, the present world does not need a better technique, which might be used for doing evil more thoroughly than at present, but a better understanding of what is "good" and what is "bad". After understanding this an undeveloped sociotechnique will be a handicap which can be easily rectified.

E. DUNSDORFS.

Liberty and Learning: Essays in Honour of Sir James Hight. (Whitcombe and Tombs Ltd., Christchurch, 1950). Pp. xiii + 328.

No one has contributed more to the University in New Zealand than Sir James Hight. Even the bare record of his career indicates this. Appointed Lecturer in Constitutional History and Economics at Canterbury University College in 1901, he became Professor of History and Economics in 1909, elected to take the Chair of History when the two were split in 1920, and was made Rector of the College in 1927. A member of the Senate of the University of New Zealand from 1912, and of the Academic Board from 1915, he was elected Pro-Chancellor in 1935 and Chairman of the Board in 1934. But all this, impressive as it is, conveys nothing of the respect and affection Hight has inspired in all who have been associated with him, nor of the extraordinarily beneficent influence of his personality upon both scholarship and administration. For my own part, I have never met, and do not expect to meet, a greater university man.

Hight's career has been remarkable in many ways. A graduate in English and French, and wholly educated in New Zealand, his versatility and strength of mind were such as to procure him a joint chair in history and economics, and to make important contributions to both subjects. In history it is sufficient to mention the classic work (in collaboration with H. D. Bamford), *The Constitutional History and Law of New Zealand,* and his part, as adviser and contributor, in the New Zealand volume of *The Cambridge History of the British*

Empire. In economics he wrote a number of articles, took a distinguished share in the official reports on the Cost of Living (1912) and the Coal Industry (1919), and was Chairman of the Economic Committee of 1932. But much of his greatest influence has been as a teacher. He seems to have had an almost instinctive understanding of the ideal requirements of university teaching, and no one has succeeded better in giving them sustained, practical expression.

This volume is a tribute by former students and colleagues to the work and personality of a most remarkable man. Sir Thomas Hunter, also a distinguished administrator, furnishes a characteristically informative and wise essay on Hight's work for the University. Condliffe, one of his two greatest pupils, writes appreciatively, and even a little nostalgically, of the sound and generous training Hight provided under appallingly backward conditions. Harrop contributes an appreciation of Hight as historian, which, although brief, succeeds in bringing out Hight's qualities of thoroughness, skill in summarizing, and discerning judgment. The Editor wisely decided to illustrate these qualities further by including one of Hight's own addresses, "Some Observations on the Use of History".

The remaining essays, which comprise most of the book, are significant mainly in that they reflect Hight's wide range of interests and his deep conviction of the unity of knowledge. Two scientists, two classicists, three historians, two lawyers, and two economists contribute essays within their own fields, but Condliffe and Copland have chosen more general topics; "Scholarship and Scholasticism", and "Culture versus Power in International Relations". These essays vary in quality, and show occasional marks of careless editing, but on the whole they are worthy of the occasion.

Some are loosely linked because their themes are partly methodological. Allen provides a very competent appraisal of scientific method, and of the impact upon it of war and atomic development. Parton argues that natural scientists should include some general history in their course so as to lessen the risk of becoming "technically competent barbarians". Condliffe treads the old ground of the inadequacy of mechanical applications of scientific method to social problems, but with a springy and graceful step. Broadhead shows that much of Thucydides' glory arose from his work as a *philosophic* historian. Phillips, in a brilliant essay, illustrates his own views about political science by means of a lively study of John Locke. Webb suggests that De Tocqueville surpassed his fellow political scientists in penetrating intuition because he sensed that the community, not the State, was the basis of politics, but failed to develop his subject because he never saw this sufficiently clearly.

Two of the remaining five essays deal with general aspects of law in New Zealand to-day, and another two with monetary conditions. My own contribution is merely a reprint of the paper I gave to the Perth Conference of the A.N.Z.A.A.S. on the advantages of joining the I.M.F. Tocker, however, offers a new and valuable analysis of inflation in New Zealand since 1938, and makes interesting suggestions for dealing with it.

Copland's essay deserves separate mention, not only because of its quality, but also because it, better than any other, reflects the quality of Hight's own interests. Composed as a memorial address to Professor Roxby, the head of the British Council in China, it puts a persuasive, and sometimes moving, case for strengthening and promoting international relations by cultural means.

C. G. F. SIMKIN.

What Do Economists Know? By Benjamin Higgins (Melbourne University Press). Pp. 166. 15/-.

In six public lectures Professor Higgins set out to interpret the role of the professional economist to intelligent laymen and beginning students. Though his preface refers to prevalent "fuzziness of thought", the book itself provides many examples of this.

The first three lectures—on what economists know, where they disagree and broad objectives of policy—are well put save for at least two verbal errors, which may deceive young students (page 57 "workers" for "workings", page 83 "instrument" for "implement"). Still one must object to his misrepresentation (page 2) of Professor Robbins' definition of economics which stresses economic *aspects* and eschews the notion of specific economic *phenomena*. It is a disservice to economics to suggest otherwise and also to use in illustration an aspect of behaviour which is uneconomic and therefore (except in a slave society) irrelevant.

A book which seeks to convince the layman of the value of economics as a guide to policy must carry its justification in every word and sentence. It must avoid basing argument on specious assertions of antitheses. The last three lectures, dealing with Conflicts, Policy and Democratic Institutions, will provide the sceptic or antagonist with all the instances he needs to demonstrate the shortcomings of economists.

It is pointless, except for philosophic abstraction, to base argument on a distinction between subjective and objective conflict. Who can say whether grounds for conflict are imagined or real? Nor is there evidence, except from business men themselves, that the struggles for "power", or to maintain "status" and "prestige", count for

more than the need to maintain or increase their incomes. Also the asserted distinction between political and economic conflict will be accepted uncritically by some and rejected completely by others. Surely all conflict, in a social context, has political and economic aspects. This universality of economic aspects was Robbins' great contribution to clear thinking, and the attempt to base argument on classes of conflict (using competition, conflict or strife to convey emotional undertones) is out of place in a book designed to interpret to the uninitiated the merit of economic analysis.

As his references to the real world become more specific they become more misleading or naive. Must we still take seriously the German demands of 1935 for colonies when everyone knows beyond doubt what lands they had in mind? "What men *say* in politics seldom expresses their true feelings", (Ortega y Gasset in *Invertebrate Spain*). He reaches the conclusion that colonies may play a bigger role in the future, at a time when colonial systems are crumbling, when France is more than ever the "rearguard of a civilization which is retreating in disoder", when the United States is building a galaxy of bigger and better Singapores.

He cites the example of the Axis Powers to refute the thesis of Malthus, Mill and Marx that foreign investment leads to imperialist wars. His case rests on the assumption that these powers were at peace from 1930 to 1939. For all States war and war preparation has always been an effective substitute for foreign investment. The economists reasoned from free market assumptions, and the suspension of free markets by the Axis Powers, for lack of external investment opportunities, supports Marx.

After years spent in warning students to leave to journalism the rhetorical question, the "iffy" question and argument by analogy, one cannot recommend a book which assures us that the threat of war comes from rival ideologies rather than from rival world powers, and gives us this gem of double talk: "Would anyone deny that the danger of war would be less if U.S.A. were communist and U.S.S.R. a western capitalist democracy"?

As for analogies, it would be better to compare economists with pathologists than with medical practitioners. Surely the business man is the better counterpart. It would be better still for economics to eschew analogies.

One would like to know whether his Civil Service for the opposition parties is to be the Permanent Opposition Civil Service or whether it should play Ins and Outs.

The contention that the Arbitration Court is a a Fascist institution might have some point for a debate by the political science

students of a generation which has forgotten another Higgins who wrote *A New Province for Law and Order*.

No trade unionist will treat with respect the "reasoning" of an economist who claims that most economists have been "sympathetic to the underdog". It is mere patronising Victorianism which betrays the user, who earlier tries to explain away the class bias of economists, and who writes ambiguously, "the worker is typically (sic) hostile to *free* immigration".

In short, the second part is a mine of quotations for examination papers in the social sciences and will do nothing to enhance the status of the economist.

K. M. DALLAS.

Marxism, Freedom and the State. By Michael Bakunin. Translated and edited with a biographical sketch by K. J. Kenafick. (Freedom Press.) Pp. 63. 5/-.

In 1946 Mr. Kenafick wrote *Michael Bakunin and Karl Marx* to support his contention that Bakunin, whom Mr. E. H. Carr had called "a figure at once subhuman and superhuman" and "an irresponsible child", was a man of great intellectual power and political sagacity—in fact, "the greatest revolutionary genius the world has seen". The purpose of his latest work is to make available in translation those passages from Bakunin's writings which best summarize his disagreement with Marx on the role of the State in the social revolution, his view of the nature of freedom, and his reasons for regarding freedom and the State as incompatibles. In that not much of Bakunin is conveniently available to students, the enterprise is useful. It would have been more useful if Mr. Kenafick had not run his extracts together without identifying them according to date and manner of original publication. As it is, the book is a trap for the unwary reader, who may suppose, if he is a preface-skipper, that he is reading a continuous work. Lesser blemishes are some perverse footnotes contributed by Mr. Kenafick and some atrocious misprints contributed by the Freedom Press. The extracts show Bakunin as an acute and at times astonishingly prescient critic of Marx and scientific socialism, and it may be that his critical foresight has been insufficiently noticed. But if we are to accept Mr. Kenafick's implied invitation to reconsider not merely Bakunin's analysis of Marxian politics, but also his positive contribution to the development of political ideas, then it becomes necessary to put on the other side of the account Bakunin's refusal to make of his collectivist anarchism more than a mystique based on a non-rational faith in working-class solidarity and on an almost maniacal exaltation of destruction and violence. This latter aspect of his doctrine, which, unfortunately, has

had more practical effect than any other, earns him Mr. Carr's epithet "subhuman". The exponent of anarchism who seriously threatened Marx's domination of the International Workingmen's Association, was not Bakunin, but Proudhon, and it is a fair comment on Bakunin's political intelligence that he joined Marx in discrediting Proudhon and was then himself eliminated. His eclipse on this occasion is perhaps as little to be regretted as his neglect by later generations. Now that the Russians have the atom bomb they are probably safer as Marxists than they would be as Bakuninites.

L. C. WEBB.

An Introduction to Economic Analysis. By J. K. Eastham. (English Universities Press Ltd., London, 1950). Pp. vii + 392. 15/-.

This book is designed as a text for a first-year course in economics for students who intend to pursue the subject further. The short preface sets out the scope of the book, giving as its purpose "as concise an account of currently established theory as is possible at an elementary level". The emphasis is on micro-economics, but the last third of the book deals with the roots of macro-economics. In this way Eastham provides a fairly complete groundwork for more advanced studies in economic theory. Conflicting theories are seldom discussed, except on the currently controversial topics of interest and money. He discards the marginal utility theory of demand, dealing with the subject entirely in terms of marginal rates of substitution, and giving a good elementary chapter on indifference curves. It is doubtful if this is within the grasp of any but the best of first-year economics students, and he allows the non-mathematical reader to skip the chapter at a first reading.

The method of the book is to demonstrate "the nature of the tools of analysis by using them to rework questions on the answers to which economists are tolerably well agreed" (p. 9). Eastham attacks this task with a closely reasoned argument and a minimum of institutional information which make very solid reading. Exposition of the theories as they appear would be necessary in class, and students would need to seek elsewhere for the institutional background. Alternatively, reading guides which are essentially source material are appended to each chapter. For the guidance of the intelligent laymen, "More Advanced Reading" covers the major works on the subject of each chapter. Presumably such a student would choose the topics which most interested him for further study.

The book is well integrated and guards fairly well against the danger of the student putting value theory into one locked compartment, monetary facts into a second, and international trade into a third. Some rather novel, but eminently logical combinations of

subject matter result, and some chapters seem slightly disjointed. But the main thread of the argument is clear and continuous. For instance, joint and composite supply and demand are not relegated to a separate chapter, but are treated as part of their respective subjects. A brief catalogue of the legal controls on production is treated not as a sociological phenomenon, but in relation to costs.

It is inevitable that some will disagree with Eastham's choice of theories, and others with the particular scope chosen for a first-year course. Nevertheless, the book develops logically and gives a sound grounding in elementary economics. It is as useful and comprehensive in its field as anything we have seen recently.

N. BURNS.

Proceedings of the Seventh International Conference of Agricultural Economists. (Oxford University Press, 1950). Pp. xiii + 372.

The seventh meeting of the International Conference of Agricultural Economists was held at Stressa, Italy, in August, 1949. Its bill of fare offered the usual varied diet: two or three principal subjects and almost a host of individual contributions from teachers, researchers and practitioners in agricultural economics. The principal subjects were Peasant Farming, Agricultural Co-operation and the Modern State, and the Spread of Industry into Rural Areas. Major papers were presented on these topics, respectively, by Senator G. Medici, Professors A. W. Ashby and V. Visochi (both on co-operation) and Professor R. G. Tugwell.

Professor Medici's paper, which appeared to regard peasant and family farming in all forms as identical and to over-emphasize the pathology of peasant farming, received kindly, but effective, criticism at the hands of Professors Benedict and Ashby. The very great range in the nature of farming problems was brought out in Medici's great concern at the excessive ratio of rural population to land, while later papers showed a position in some countries as, indeed, in Australia, where there is need to raise the ratio as a means of intensifying farming.

The paper and comment on co-operation seemed to lack urgency and relevance to current agricultural problems except in the hands again of speakers from countries with a too high farmer-land ratio. In these areas the importance of promoting "savings" by collective action in combined farm purchases of materials and sales of products seemed more obvious. Whether co-operative "earnings" or "savings" are profits provoked some comment—theoretical and "practical" (from a speaker obviously worried about the equity or otherwise of freeing co-operatives from company taxation).

It seems from the record that Dr. Bean's charts provoked more discussion than Professor Tugwell's paper on the spread of industry into rural areas. Tugwell was trying to speak from experience of the real problems—political and administrative—which beset those trying to ease rural poverty by industrialization. Dr. Bean had no difficulty, in the style of Colin Clark, in showing beautiful statistical curves fitting his data and demonstrating that the greater the proportion of population engaged in agriculture the lower the per capita income of a region. The data suggest the importance of having wealthy resources, including plenty of land or extensive opportunities for trade. There were not lacking speakers to point out that the real task was what to do in those cases in which population numbers were very large in relation to resources. Point IV programmes and Colombo plans can do no more than effect gradual improvement in per capita incomes by making agriculture more efficient and by providing industrial employment opportunities. In short, no magic wand can be waved to produce a low proportion of population engaged in agriculture in India and *therefore* a new place on Dr. Bean's charts at the top of his curve among the high per capita income areas. The charts illustrated the problem only: Tugwell's effort was the more pedestrian, but it was on the right, although rough and slow, road to progress.

There is no room to comment on the other papers, but several repaid reading. These included Thomas on Forward Price Fixing in British Agriculture, and Thibodeaux on Food and Agriculture in the European Recovery Programme.

The International Conference continues to provide a useful forum for international discussion in which no common denominator agreements are sought and the delegates are free of the worry of cabled instruction from home governments. Would that there were more such opportunities and that Australians were more prominent participants!

J. G. CRAWFORD.

Agricultural Co-operation in the Commonwealth. By Margaret Digby. With a foreword by C. R. Fay. (Basil Blackwell, Oxford, 1951.) Pp. vi + 172. 15/- stg.

This is a book on the development of the co-operative movement. It is concerned mainly, but not exclusively, with agricultural co-operation, for there is some discussion of co-operation in the fields of banking, housing, insurance, retailing, and so on. The book opens with the fairly familiar story of the origins of the movement in the British Isles and then relates how that movement spread or was

spontaneously created in the seven Dominions and some thirty colonial territories. Of special interest to Australasian readers are the chapters on Australia and New Zealand, for very little has been written on the co-operative movement in these countries.

The treatment is almost exclusively socio-historical. The economic aspects of the subject are given very scant treatment indeed, and the statistical appendix is so meagre that it can provide only the vaguest idea of how important is the co-operative movement in the various countries. The book is no doubt useful as a convenient source of information, but one feels that a final chapter of a survey character—something more ambitious than the three-page conclusion given—would have added immeasurably to its usefulness, though it would have emphasized its limitations.

G. A. J. SIMPSON-LEE.

World Resources and Industries: Revised Edition, 1951. By E. W. Zimmermann (Harper & Bros., New York). Pp. 818. $7.50.

"World Resources" is a big topic, and necessarily calls for a great number of pages, however carefully the examination is compressed. Zimmermann makes no attempt to limit his discussion, and all topics are fish to his net. The work is described most easily as an economic geography, but so widely does the author's mind range over his world stage that there is almost nothing in the field of resources that is foreign to his task.

From region to region, differences in the totality of resources, compared with the numbers of people dependent on these resources, determine standards of living and levels of comfort. That, in the round, is the major theme which runs through the book.

Although such an expansive treatment leaves the author open to critics who prefer a more formal and limited study in their textbooks, it can scarcely be denied that it yields a splendid liberal education, a fine discipline in straight thinking and a training in inductive logic covering a great range of problems.

Again, however widely Zimmermann permits his task to take him, he is never far from the use of resources in its implications for standard of living; and though he is mainly concerned with aspects of human life, international economics is the background against which his broad theme is painted. All the many factors, from man-land ratio to differences in average prosperity, are summed up incisively in terms of physical income per head. This is a method born of imagination and matured by experience.

It is one of the high spots in the survey of a modern world, more and more dependent upon resources as over-population becomes

oppressive, that world sufficiency for either war or peace becomes the great dominating problem of international affairs. The drift to the cities and the mechanization of primary industries are problems arising out of industrial evolution. The congestion of millions of people in large cities, and all the social problems of urbanization, are not merely a basis for economics, but a constant reminder of the way in which geography determines the distribution of resources and of population, and of how little danger or common sense promotes that kind of dispersion of industries which makes, if not for safety, at least for a more natural way of life.

It is difficult, in a short review, to single out for comment the major topics round which Zimmermann has woven his stimulating speculations and predictions. It is rare, for instance, in these days, to find a writer dwelling lovingly upon the benefits of specialization in production and the advantages of freer trade in helping to raise world standards of living. We have swung away from one century of international freedom in the movement of goods to another where restrictions on trade became world-wide. Countries are now struggling for an economic self-sufficiency that is fencing them round with such controls, quotas and international trade agreements as mercantilism never knew. Pigou's *Economics in Practice* merely touches the scale and scope of the problems as Zimmerman has set them out, and if this be economic geography, then it is the indispensable basis for economic training and research.

The scientist and the engineer have, of course, been largely responsible for this. Zimmermann thinks he is now convincing politicians and governments that the discovery of unused or new resources has made it possible for most countries to produce their foodstuffs, raw material and fabricated goods at home, rather than to import them from abroad. This is of great importance at a stage where food and population, and the rate of increase in productivity as compared with the rate of increase in population, have given us problems that agitate the keenest minds in every country. In the distribution of goods, Zimmermann's treatment of industrial concentration and transport has an appeal which has produced from his mind a classic chapter. It is all most stimulating in a world of economic doubts about planning and planners.

G. L. WOOD.

The International Economy. By P. T. Ellsworth. (Macmillan, New York.) Pp. xxi + 922. $5.50.

This new text-book by Professor Ellsworth, a successor to his earlier *International Economics,* represents an attempt to overcome "the

difficulties experienced in teaching the field of international economics along the traditional lines of a separate study of theory and its applications to policy'' by ''a combination of history, analysis and factual data''.

The technique adopted is ingenious. Sections of narrative of international economic history alternate with sections of theoretical analysis in such a way that each portion of theory is introduced by that phase in the history of the international economy which can, in some way, be said to have given rise to it. Thus, the theory of international trade, from its classical beginnings to the latest refinements, follows a hundred page account of the mercantilist period, mercantilist thought and the transition to liberalism. A historical section on ''Great Britain and the Developing World Economy'' of the nineteenth century leads up to the theory of the balance of payments and balance of payments adjustment, including the theory of the gold standard. The next section, ''The Decline of the International Economy'', after an excursus into the historical growth of nationalism and protectionism and the theory of protection, presents a continuous narrative of international economic history from 1870 to 1939, followed, in turn, by ''The Theory and Practice of a Disorganized Trading System'' which covers all aspects of the theory of foreign exchanges, and a comprehensive analysis and description of methods of exchange and trade control. The final section, ''Problems of Reconstruction'', discusses all the major post-war international economic problems and institutions.

As this summary shows, Professor Ellsworth has settled for a compromise between a strictly chronological account of the parallel development of institutions and theory, on the one hand, and a complete separation of history and theory, on the other. Chronology determines no more than the order of presentation of the major divisions of theory, each of which is analysed in the usual logical order. Inevitably, the compromise is only partially successful in its major object of linking theory and practice. While the historical sections help in a broad way to indicate the institutional background to which the major divisions of theory are, or have been, mainly relevant, the link is often rather tenuous, the arrangement a little forced. One effect of the long historical sections, moreover, is the expansion of the volume to over 900 pages; it is difficult to share the author's confidence that ''it should be possible to cover the materials presented here in a semester, even allowing some time for outside reading''.

The precise degree of success of Profesor Ellsworth's experiment in exposition, however, is less important than the very great merits of his text-book in many other respects. The historical sections are well-balanced, stimulating and eminently readable, the theoretical analysis lucid and careful. Except in one or two places (such as the chapter

on foreign exchange theory, where the useful, but unusual, concept of the "elasticity of demand for foreign exchange" may cause difficulty) the theoretical sections should be intelligible even to pass students, while teachers of the subject will find it useful to have for reference a comprehensive and reliable work covering all but the most recent (i.e. up to about 1949) developments in every field of international economic theory. The author, not unexpectedly, finds himself in sympathy with a broadly liberal American approach to present-day international economic policy problems; but he makes an effort, hitherto unusual in American text-books, to deal fairly and seriously with the heretical views propounded by the Balogh-Henderson school.

$5.50, converted into £A at the Australian book trade's rate of exchange, is a stiff price for a text-book, but who would not pay it cheerfully for Low's "Sketchbook in Jargonland", which serves as the frontispiece?

H. W. ARNDT.

Cyclical Movements in the Balance of Payments. By T. C. Chang (Cambridge University Press, 1951). Pp. x + 224. 18/- stg.

This study is an ingenious attempt to justify the use of "Keynesian" income analysis in the explanation of international as well as of internal economic activity. Dr. Chang has specifically chosen to analyse the impact of the international propagation of trade cycles upon the composition and behaviour of balances of international payments. The theoretical analysis is derived, with minor modifications, from the work of Joan Robinson and R. F. Harrod; the treatment of the statistical data, which covers the inter-war period, is inconclusive.

Five main types of trading country are classified, the balance of payments of a country of each type is analysed for the period 1924-38, and an attempt is made to drive some conclusions as to the general nature of the equilibrating process of the balance of international payments. This discussion of the equilibrating process is one of the most important parts of the book. The classification of internationally trading areas used is: (a) highly industrialized and deficient (Great Britain); (b) highly industrialized and self-sufficient (U.S.A.); (c) less industrialized countries, with some domestic agriculture (Sweden); (d) agricultural (Australia); (e) mining (Chile).

Carrying through the analogy with the analysis of the domestic trade cycle, emphasis is firmly placed on the casual role of effective demand (in this case, for imports and exports). Consequently, the income and price elasticities (of demand) are key variables in the analysis. Dr. Chang reaches the conclusion that income changes are far more significant than price changes in determining world demand for

imports and exports. Strangely enough, this accords perfectly with the a priori theory outlined in the opening chapter.

If true, this is a highly significant conclusion. It suggests a way of co-ordinating the theories of international trade on current (or commodity) account and the theory of international capital movements. The demonstration of the inefficacy of the international price mechanism in eliminating imbalances in commodity trade drives another nail into the coffin of the neo-classical theory of international trade—with its assumption of general full employment and automatically balanced trade (through the price-specie-flow mechanism) between nations of equal bargaining power.

It follows that institutional rigidities and non-price factors are important in determining the flow of international trade. This lends incidental support to the arguments of Balogh for the use of discriminatory trade practices to meet the problems posed by a persistent deficit in balances of payments. How conclusive such support would be still remains to be determined.

Even if we accept Dr. Chang's main thesis, there are some minor quibbles. International capital movements are regarded as predominantly induced (i.e. by previous income changes). This appears to be an over-simplification adopted for ease of exposition and neatness of solution, which may be justified. But the evidence produced by Dr. Chang is not sufficient to prove this point. Further, an important part of Chang's argument is based on the assumption that there is a secular shift in the terms of trade against agricultural products. This appears to have been true of the inter-war period, but is it equally true of the post-war period? If the terms of trade are shifting, secularly, in favour of countries such as Australia, this would call into question Dr. Chang's conclusion as to the unimportance of price changes in controlling the flow of world trade, because of the effect on the relevant price elasticities of demand.

It is a pity that the statistical techniques available were inadequate. This is no reflection on Dr. Chang as a practising statistician; rather, it is an indictment of the conceptual aridity of statistical theory.

J. R. WILSON.

The Commerce of Nations. By J. B. Condliffe (W. W. Norton & Company, Inc., New York, 1950). (George Allen & Unwin, Ltd., London). Pp. xi + 884. 36/- stg.

The distinguished New Zealander, who is now Professor at the University of California and Director of its Teaching Institute of Economics, will be remembered as the author of the first *World Eco-*

nomic Survey published by the League of Nations in 1932. In the present volume he applies the same powers of marshalling unwieldy masses of complex details, of balanced judgement and of lucid presentation to the whole field of international economic relations seen in their political and intellectual context and conceived as a historical process, beginning with the age of silent barter and ending with the Point Four Programme and the plea for a "freer trade". To a superficial observer not schooled to read between the lines the book may well appear as a persuasive rationalization of American attitudes. It is more likely that the author has had a fair share in moulding these policies and doing his best to keep them on an even and equitable keel. It is significant that he justifies the demand for a liberalized trading system by power as well as by real income arguments, and that he admits that the United States will have to make the greatest tariff concessions if the process of freeing trade is not to be slow and uncertain. In fact, he notes, barriers are increasing even in American interstate trade, though "not yet" (p. 428) on a scale that appears serious.

Like most representative productions of this age of twilight, Professor Condliffe's book is guided by two inspirations. His is an engaging faith in the virtues of enterprise in general and of foreign commerce in particular, regarded as a source and test of inventiveness, flexibility and widening of horizons, both material and intellectual. But his is also a stoic determination to realize that the loud and silent revolutions of our times have so deeply altered the political, social and moral conditions of national and international policies that no return to the philosophy of natural liberty and all its implications is possible—so that the very assumptions on which most of our economic theory has been built have lost much of their validity. Sometimes, it is true, the new forces appear in his exposition as mere obstacles and retrogressions imposed on the pursuit of economic welfare by the seeming irrationality of political ambitions and prejudices. This propensity seems to have prevented him from giving of the signal characteristics of the new situation as forceful and coherent an account as Gunnar Myrdal has done in his recent article on economic planning (*Manchester School*, January 1951).

But Condliffe has too massive a sense of realities to assume that process to be reversible as a whole, and he is too competent an economist-adviser not to see that most current objections to the growth of State action, and even to oligopolistic developments, do either not hold or concern matters of the second order of smallness. His objections against State interference and "planning" do not follow from Hayek's belief that a man will not be able and willing to act for others as intelligently as on his own behalf. "The real

risk that is run by a policy of State trading is not so much that the terms of trade will be influenced by a government monopoly, as that there will be reduced trade which will be organized bilaterally". The issue is not man versus the State, but abundance (and power which, he believes, will grow and fall with it as a rule and in the long run) versus "stabilization" which, if erected into an over-riding principle of economic policy, will spell rigidity if not petrification. The solution of the conflict can neither be achieved by pursuing the "utopia" of laissez faire nor the not less utopian subordination of all economic policies to the idea of social security. The task is to weave the decisions of the enterprising trader, the State administrator and the corporation manager into a new coherent pattern of international trade, a process in which all three will have to modify their procedures and standards of behaviour within the framework of institutions flexible enough to yield to "the masterhand of the unforeseen". Only a profound transformation will prevent the economies of the West, and a fortiori of Asia, falling an easy prey to Soviet strategies. But the central teaching of Smith and of the Classics (a group which Condliffe rightly regards as not including the author of the *Wealth of Nations*) remains valid; it is the size of the cake which matters (ultimately), not the way in which it is initially distributed between classes and nations. The theory of comparative costs has to be abandoned, but the criterion of comparative advantages remains in force. So do Smith's evaluation of fair competition and the classical demonstration of the advantages of "territorial specialization". This may appear almost a trivial statement. However, having during the last years seen young students wincing when in a lecture on the history of economic thought, Hesiod's praise of competition (the good Eris) was mentioned, I for one feel that it is timely to unbury these old truths and to underpin their analysis by such a vigorous and comprehensive account of the century in which the "commerce of nations" seemed at the verge of merging into "international trade", as fills the central three hundred pages of this work (Part II). They show the author at his best, but are open to the criticism that his sociological and ideational analysis is not profound enough to make him see that this Paradise Lost of Laissez Faire harboured—for non-economic reasons—in its own womb the seed of its self-destruction.

Obviously the book has been written for laymen and beginners equipped with very little, if any, knowledge of economics, and whose general knowledge is very different from what could be expected of a university student one generation ago. Not only short biographies of Dante and Marx are inserted, but the meanings of renaissance and of proletariat are explained. . . . A friendly teacher of unusually

wide experience, Professor Condliffe knows that in this age of neo-barbarism simply nothing can be taken for granted; and that nobody can expect to be heard who does not repeat twice and thrice and four times, and who does not take the reader with superhuman patience by the hand. Hence the inordinate length of his opus magnum. But although advanced students should find many of these 884 pages dealing with things and ideas they have (or think they have) learnt long ago, they will do well to test their belief by accompanying the author through his leisurely wanderings and to profit from his sagacious comments and his skill of presentation, but above all from his excellent observations on methodology (especially Part I, Chapter V). If the passages quoted from Alsberg, and condensed from Eddington, which form the motti of Part IV, would be pinned to every seminar door it might well be that many of our periodicals would, after twenty years, look different from what they do now.

To note points on which the reviewer would like to raise doubts or objections would require an article of similarly Brobdingnagian dimensions. In token-fulfilment of his duty, the critic may here only observe that Condliffe's account of Adam Smith's doctrine seems to neglect the decisive passages of the second and third book of the *Wealth of Nations*, which alone allows one to ascertain Smith's attitude to foreign trade; that no cognizance is taken of Colin Clark's magnificent hunches on the near future of economic development; and that whenever the author mentions German thinkers and institutions his information is, to put it very gently, highly inadequate. This is, in an author of such wide experience and reading and such liberal sympathies, the more remarkable as in his historical approach and his determination not to separate economic phenomena and judgements from their political, social and ethical matrix, he has done more than any recent author to fulfil the postulates of the German historical school (or rather schools). The work would have pleased Gustav Schmoller immensely. At the same time Edwin Cannan would have welcomed this masterly specimen of "simplified economics". To have simultaneously satisfied two such antagonists is no mean achievement.

KURT SINGER.

World Trade and Investment: The Economics of Interdependence. By Donald B. Marsh (Harcourt, Brace & Co., New York, 1951). Pp. xx + 594. $6.75.

The sub-title of this excellent modernised analysis of the practices and theory of international trade and investment points to its frame of reference. With no loss of scientific objectivity the author's aim is

purposive. He aims to show that analysis alone can uncover the conditions in which a world of interdependent nations succeeds or fails, and in what respects; in sustaining an optimum equilibrium as goods and services are exchanged. As Professor Howard S. Ellis remarks appropriately in the Foreword, the volume "brings new orderliness into what we know; it presses the boundaries of science in this field a bit farther on; and it shows how, in matters of international economic intercourse, the world can be made a better place".

The volume is divided into three "books". Book I surveys descriptively the volume and composition of international trade, the nature and usages of international commodity, money and capital markets, with an examination of short-term and long-term capital movements and their economic consequences. It finishes with a chapter on "paths to equilibrium", preparing the way for Books II and III. The student reader will find Book I less satisfactory than the remainder of the volume in that it does not quite succeed in separating the sophistication of a highly-informed author from the factual information he wishes to impart.

Books II and III cover theory and policy respectively. The careful reading of their contents will amply repay every teacher and student of economics, though, as far as the student is concerned, only after he has mastered the elementary concepts of historical and present-day economic theory. Book II, for instance, modernises the theory of international trade through the application of national income accounting techniques and the integration of the balance of payments concept with the principles of national accounting. It extends the Hicksian and Keynesian analyses to the sphere of international equilibrium. Indifference maps are employed to define equilibrium in international values. The author does not claim that his elaborations do more than re-define neo-classical theory of international trade in modern terms. "The new terminology", he says, "is merely the purification of an idiom already familiar to readers of the international economics of Marshall and Edgeworth; but this purification is necessary if the theory of international values is to keep in step with development in other branches of theory, or, better still, assume its traditional role as the spearhead of advance in economic thought".

A number of the author's chapters are on the level of good literature—a welcome evidence that pre-occupation with algebra and geometry (the book is not made too formidable with mathematics) need not utterly destroy an economist's love of and capacity for writing good English.

F. R. E. MAULDON.

Principles of Private and Public Planning. A Study in Economic Sociology. By Wilhelm Keilhau (George Allen & Unwin Ltd.). Pp. 272. 16/-.

The title of the book is in the nature of a misnomer. Firstly, the book has only a few chapters on what we understand by economic planning; secondly, the sub-title "Economic Sociology" might be rather replaced by "Philosophy of Economics".

Dr. Keilhau explains first how the idea of economic planning gained popularity with the man-in-the-street due to Mrs. Wootton's clever slogan, almost a propagandist trick, i.e. the rhetorical question, "Plan or no plan?" Obviously a man-in-the-street prefers a plan to no plan. But Dr. Keilhau points out that the question is simply without meaning, because economic planning of one kind or another is inherent in any economic system. He favours instead the term, "State-directed economy", or "centralized planning".

Then several reasons are given why economists had almost nothing to say about economic planning in the past. One is very interesting. The economists of the 19th century were very deeply influenced by economic determinism. They tried to discover economic laws operating independently of individual will power. Hence the idea of deliberate planning did not seem to fit into their system.

In the first part of the book Dr. Keilhau submits a great many of the traditional concepts to a critical examination, and in the second part, having forged what he considers better instruments, he dissects the various economic systems separately. In the actual results, however, both parts have become somewhat disconnected fragmentary contributions.

To start with a re-examination of the traditional concepts, he points out that "there are no free goods". About those who repeat after Rousseau, condemnation of the original appropriation of land, Dr. Keilhau says that they are "under an illusion that the first appropriator got his enclosure for nothing . . . none of these learned men can for an hour have worked on the erecting or repairing of a fence or a stone wall". Then he proceeds to enumerate the improvements in cultivation made possible by enclosure.

Dr. Keilhau uses and extends the ex-ante and ex-post analysis (calling it "pre-time" and "post-time") to the theory of distribution. He points out that Ricardo and others operating in "post-time" had to find a different theory for wages, rent, interest and profit. But if we operate in "pre-time" the problem of distribution is simply reduced to one theory based on inducement to economic collaboration. Then it is stated that interest cannot be explained from any principle

of a general liquidity preference, because in various situations there may be liquidity dispreference.

The difficulties and the subjective character of any estimation of the value of capital are pointed out as well as some of the effects of this. Costs are subjective because the "depreciation cost" which is added to other costs is a purely subjective estimate. Hence profits are also subjective and we cannot explain their determination by any economic law. An inadequate allowance for depreciation undermines many otherwise sound businesses during the period of rising prices in times of the so-called "prosperity".

The author is an adherent of the price mechanism, and has stated the usual arguments for the price system, and against centralized planning. Some interesting passages are given on the concept of freedom, the origin and the growth of freedom (freedom = the number of alternatives open) with the growth of technical, cultural and economic knowledge.

The Quantity Theory of Money is rightly criticized as not taking any account of the effects of the change in the price of imports, and, secondly, as giving no clue to how deflation occurs. But his own discussion of inflation is most unsatisfactory. When speaking of changes in the quantity of money and their effects, he completely ignores the velocity of circulation—witness: "In fact, as low prices demand smaller quantities of money, the inflationary state aggravates during deflation". In any case this statement does not agree with a new definition of inflation (one more to join a legion) that he proposes: "By inflation we understand an excessive increase in the quantity of money if the public realizes that it has caused depreciation of monetary values".

In general there are too many big subjects that are smugly attempted and superficially treated. Several mistakes are made (an innocent one referring to Mrs. U. K. Hicks as Miss Hicks). The discussion of computation of national income is far too cursory, out-of-date and altogether unsatisfactory. In particular, it is implied that the expenditure method is inherently better than the added incomes method, without a recognition that the results of the two must be equal if we use the same definitions and that the one method must often supplement the other.

It would be impossible here to point out all the virtues and shortcomings of this book. It seems that the quality of the work would have gained a great deal if it had been subjected to somebody's criticism before its publication. All the same the book undoubtedly has many virtues which make it really worth while for any reader.

K. BIEDA.

The National Income of Malaya, 1947-1949 (with a note on 1950). By Frederic Benham (Government Printing Office, Singapore). Pp. 273 (with tables).

Dr. Benham's *National Income of Malaya, 1947-1949,* is the first study of its kind presented in book form in this country. The author, and those who helped him, must be congratulated for bringing together a good deal of material otherwise difficult of access. The study in itself—a pioneer effort of the first order—has been welcomed by all those who, like this reviewer, have groped around for something more substantial than odd and related papers—however good these might have been—and occasional official statistics. But because of the present peculiar socio-economic and political situation of Malaya, one finds it impossible to read this work dispassionately as a quantitative analysis of this country.

An attempt is made to uncover the economic structure of the Federation of Malaya and the Colony of Singapore treated as a whole. At this point one begins to feel uneasy. The author finds his information insufficient and his tools of research inadequate. While the former drawback is admitted in full, it is suggested that the latter, though apparently implied, should have been openly stressed. The application of Western methods of statistical analysis and calculation to this environment may lead to unfortunate results. The process of reasoning which suggests that what may have been thoroughly efficient in the one location will be successful in the other, as long as it is applied to figures, is fallacious. While the degree of error may be infinitesimal when these methods are shifted within western countries, and corrections possible, such is not the case when the change is from West to East.

In almost every page of the study under review gaps have been filled in by estimates, "in some cases so rough that they are only informed guesses" (e.g. pp. 1, 171, 193), and deductions have been made in the same way. Now, if this method may be successful, say, in Australia or England, where all institutions, type and form of industry, standards of living of people and cultural backgrounds affecting the economic structure of the country, are well-known and by the use of subsidiary statistics can be measured quite successfully, in Malaya this is only possible to a very minor extent.

Malayan statistics of any kind are at a price for their quality, accuracy and reliability. Large private concerns, rubber and tin groups—together with minor firms—will not disclose the more vital information even to the Government. The rate of income-tax evasion in Singapore has been roughly calculated at 84 per cent. of total taxable population. One is not as optimistic as the author when he

says that the information he obtained from private individuals, share-brokers and companies was sufficient even for an informed guess. This applies particularly in the case of profits (pp. 156 ff). Dr. Benham does point out some of these difficulties, but one senses that he underestimates their effect on his study as a whole. He should have realized that other students—just as interested as he is in knowing more about the Malayan economic structure—would feel keenly on this point. It challenges the value of the study. When the author must admit that he cannot rely e.g. on Departmental Reports (p. 148), one becomes highly sceptical that, even together with the data accurately known, "the margin of error (in estimating the national product) is not more than ten per cent." (p. 1). When, later (p. 193), one is told that in the case of some individual items—which are not specified—this percentage does not apply, one feels utterly disconcerted. Thus, at the onset, this study must be viewed in the same manner as the observer may look upon a distant scene from behind a veil of fog. One hopes for a still clearer view in the future.

While the output method is used almost throughout, in a number of cases one is told that other methods have also been employed. These are outlined in the introduction. The clarity of their exposition must be highly praised. Rough estimates have been made of income received and of consumption plus investment. "They provide some check, although an imperfect one owing to lack of data, on . . . estimates of Net National Products" (p. 6). This would be in order if the cases where such shifts took place had been few. However, with the field before one's eyes and well knowing the difficulties which beset the Malayan statistician, one has an uncomfortable feeling—in reading the estimates—that there has been some kind of dainty skipping hither and thither from one method to another whenever figures could not be obtained to fill the empty niches.

The second point that must be mentioned is related to the fact that Dr. Benham's *National Income* offers little indication as to the important place taken by agriculture proper in Malaya. In this country agriculture includes the growing of rubber trees as well as tilling the soil, padi growing and fishing. The Malayan Census for 1947 shows that a little over one million people (over half of the Malayan working population) are agriculturalists in the Federation (not including about sixty thousand fishermen). It is a well-known fact that the disparity of incomes between the rural and urban group is very great and unfavourable to the former. Yet, although the author does separate figures and offers totals for wages and salaries (tables 12 and 13) and for profits (pp. 153 and 157), at no place is one given a figure for total income per head of the rural group. Only by laboriously turning backwards and forwards to the various tables

and appropriate data in the text can one obtain an idea that the disparity in average income per head between the two groups mentioned before is very high indeed. It points to some kind of malaise or ill-balance within the economic organism of Malaya. About half of the people at work get one-third of the total national income. Why the omission of a clearer statistical statement on this point?

The same question could be asked in reference to the net national income accruing to the various ethnic groups. Search as he may the reader will nowhere find what would be—socially and politically—a most illuminating set of figures. One wonders whether, at this point, lack of data or official pressure accounts for the absence of a statistical table which would have been of great interest to local nationalist elements. These are the same people professing scepticism as to the size of the figures given for national income paid abroad—the third point that intrigues one in reading the work under review.

Anyone studying the data on net income paid abroad will find his qualms that Malaya is being exploited, as the "native" would have it, entirely unfounded. A bland numerical statement will tell him that only between 1·5 per cent. (in 1949) and 2·8 per cent. (in 1950) of the national income was paid abroad as profits and interest—"a much smaller proportion of National Income than is *often* supposed" (italics by the reviewer), (p. 194). If it should be inferred that such has always been the case—this would be entirely incorrect. Malays who think of exploitation—and they are not always suffering from hysteria—do so in terms of a period of four decades at least. The work under review examines only two years and, for that matter, two peculiar, post-war, years introducing all the rough guesses mentioned before to boot. Thus, even if the figures offered were correct to the last cent, they would not deny the truth of what is the belief of well informed individuals that such income paid abroad has definitely been not of the order of one or two per cent. of total national income, but much higher. Secondly, coming to the data given in the study, what has happened to undistributed profits, increases in assets marked down to income account, so-called directors' general and "entertainment" expenses (and fees) which, so common and so large an item for Federation and Singapore firms, are not even mentioned in passing? Lastly, one could inquire as to the failure of mentioning such an important figure as "bank transfers". Was it not available even to Dr. Benham?

In the tense atmosphere of Malaya, with its twin problems of communalism and communist "emergency", it might have been considered unwise to present those data which would have created still greater inter-racial friction or would have offered an opportunity for

undesirable nationalist outbursts. The treatment of the material, in the work under review, is excellent and according to all canons of theoretical economics. The intentions are splendid, but it would seem that the paralysis caused by political influence may have taken away from the effort a great deal of what—to anyone wanting *all* the facts—would have been an indispensable work.

There are also small inaccuracies and disturbing ways of tabling the data. Figures are rounded off in one place and given as they are in another. Furthermore, a number of descriptive points are rather unconvincing. One has more particularly in mind the stress placed upon industrial development in the shape of manufactures. It might be true that a quarter of the national income of Malaya is derived from manufacturing. But the largest percentage of this particular income originates from latex production and not from the manufacture of consumers' goods. Yet, in reading the tables and their explanation, one gathers the impression that the industrial development of Malaya, from this viewpoint, has been quite important. The facts, unfortunately for this country, speak otherwise.

Malaya is in a state of crisis, a situation created almost entirely by the fact that underneath it all nobody has any faith in anybody. Distrust of classes and ethnic groups towards each other is complete. There is no necessity, therefore, to make the picture still more confused. On the contrary, some statement as to what is and what is not in clear terms would help a great deal to solve the problem of the "emergency". We social scientists should do our utmost to offer material to bring about clarification. What is needed in Malaya is bright, clear light—not artificial penumbra.

CHARLES GAMBA.

Economic Consequences of Divided India: A Study of the Economy of India and Pakistan. By C. N. Vakil (Vora & Co., Bombay). Pp. 532 + statistical tables and bibliography.

This book is the most satisfying analysis of the economic results of the partition of India at present existing; the review is completely done and, within the limits of the statistics available, it is an extremely useful publication. Vakil, who is Professor of Economics in the University of Bombay, and is one of the most prolific scholars India has produced in this field of the social sciences, has put economic geographers and political scientists under a great debt by his valiant study.

Professor Vakil shows in great detail how the partition has gone far to destroy the economic pattern of India arising from its natural

resources, from the complementary economy which evolved, and from the ways of life and the outlook of its people. He writes that: "in 1947 India achieved political independence, but paid a heavy price in the form of partition of the country into two units, India and Pakistan. The integrated economy of the country was thus dismembered arbitrarily. In the violent disturbances that followed, large-scale transfers of population took place, the normal channels of economic life were vitally affected at a time when India was still passing through the economic dislocation caused by the war". No words could condense more neatly the conditions which were responsible for the political, religious and economic disturbances which now afflict the sub-continent; and nobody has better qualifications than Vakil for discussing them.

Recent conferences in India have exposed the deep seated difficulties of the existing situation. The agricultural economy of pre-partition India, and the land tenure and utilization of large areas have been disintegrated, at the moment when transfers from farms to factories, involving 15 per cent. of the population, were in course of planning. The social services—health, education, law and order—and the training of personnel for government departments, all in preparation for the coming of the welfare state, have suffered interruption, but not total frustration.

The book is by way of being a symposium written by four experts under the general editorship of Vakil, and the massive nature of the problems is indicated by the titles of chapters:—area and population; the refugee problem; the economic significance of mass transfers of population; agriculture; minerals; electric power; textile industries; non-textile industries; industrial development and planning; transport; foreign trade; public finance; currency; banking and insurance. In the short space of a review, five hundred pages of meaty analysis of factual material can scarcely be crystallized.

The tragedy of the past, the demographic scars left upon modern India, and the stupendous problems now facing her planners and administrators, oppress the mind of any reader who wishes to understand reconstruction in an overpopulated country. Although the book contains much evidence of haste in preparation, of duplication, of excess of words and lack of co-ordination, it is a most useful compendium. Many blemishes of this kind can be forgiven in what is a path-breaking venture into changing conditions that have not yet taken a semblance of future pattern. For that the authors can scarcely be blamed, but students can be appropriately grateful for the vast amount that has been put within the compass of these covers.

G. L. WOOD.

First Report of the National Income Committee, April 1951. (Department of Economic Affairs; Ministry of Finance; Government of India, New Delhi) Pp. 102. Rupees £1/6/-.

The National Income Committee was appointed by the Indian Government to study and present estimates of the national income of India—the first time such a task had ever been undertaken. The report under review furnishes data on the period 1948-1949, and is the combined effort of a number of well-known Indian and European experts—Mukherjee, Rao, Simon Kuznets, J. R. N. Stone and others. It is only natural then, to expect and, in fact, to find, something worthwhile arising from such co-operation.

Chapters two and three, which may be considered explanatory, are most illuminating to those students who are little acquainted with the Indian economic environment and the local difficulties of income assessment. The style is clear and concise, and the matter shows a definite high standard of analysis. In chapter three one finds a statement embodying a belief which this reviewer has expressed often enough in regard to the use of Western statistical and general research methods in the East. It runs thus: "The customary classification on national income by industrial origin cannot (in India) be taken except as a rough approximation to a classification of distinct groups in the population, whose main income is derived from a single industry. And there arises a genuine question as to whether a substantial revision of the industrial classification and a much greater emphasis than is customary in the West upon social grouping connected with the character of the enterprise rather than with industry would not be more useful . . . a great deal of analytical work remains to be done on questions of definition and classification in regard to the problem of measurability in national income estimates . . ." (p. 13).

Western methods of national income assessment can only be a guide—and limited in extent at that—to what can be done in the non-European environment. New tools of research must be forged and even one's way of thinking about such problems must be revised, and often completely altered. "In western countries statistics are largely collected directly from individuals and enterprises who are the active economic agents and have knowledge of the fact by virtue of their participation in economic activity. It becomes difficult to follow this practice in India, not only because of the expense involved and the relative dearth of the technical personnel needed for the purpose, but also because of the illiteracy of the majority of the population, the semi-subsistence character of their economic activity, and the general absence of the practice of keeping accounts either among producers or among consumers" (pp. 12-13).

The total National Income for 1948-1949 is estimated as rupees 87.1 abja (1 abja = 1 milliard). On the basis of a population of 341 millions, the per-capita national income would be equal to rupees 255 or, approximately, £20 sterling. This figure is indicative of the economic distress suffered by the millions of India.

Altogether one finds the report a most interesting piece of research which anyone wishing to know more about India, and seeking to understand the difficulties involved in assessing national incomes in the non-European environment, should certainly study.

CHARLES GAMBA.

British Economic History Since 1760. By S. G. E. Lythe (Sir Isaac Pitman & Sons, Ltd., 1950, London). Pp. 214. 22/6 Australian.

This new study, *British Economic History Since 1760,* is a welcome addition to the literature on the subject. In spite of the wealth of works published on the period of British history since the industrial revolution, there has been a notable lack of a short text-book for students which summarizes the results of the work done in the last thirty years in this field. The nearest approach perhaps was Redford's *Economic History of England,* but it covers only the period from 1760 to 1860. Moreover, it was first published over twenty years ago, and a fair amount of revision in the history of the period has occurred since that date. The more recent work by Jones and Pool, *A Hundred Years of Economic Development* also provides a first-rate text-book, but since it covers only the period from 1837 to 1937, its value as a text-book for students is thereby limited.

The painstaking work done by Clapham in his *Economic History of Modern Britain,* published over the period from 1926 to 1938, has built up a picture of the economic history of Britain since Adam Smith which is elaborate in its detail and profound in its scholarship. For the teacher of this period of British economic history it is easily the most valuable single source of information. The influence of this work upon the knowledge and teaching of economic history in the present generation is profound, and Mr. Lythe, as a former student of the late Sir John Clapham, acknowledges his debt to his master. Indeed, Clapham's influence is in evidence throughout the whole work; Jones and Pool also acknowledge their "deep indebtedness" to Clapham's work in their preface. But for students the value of Clapham's work is for purposes of reference rather than as a text-book. Lythe's book, on the other hand, will give an outline of the subject with sufficient but not too much detail.

It is true that Fay's work, *Great Britain from Adam Smith to the Present Day,* still holds a firm place in university studies because

of its vivid and lively narrative, and for the wealth of learning which marks its pages. But Fay's book was first published in 1928, and for the modern student it has almost nothing on the period of British history between the two great wars.

There was scope, therefore, for this new work by Mr. Lythe, and it is gratifying to record that he has done his job thoroughly and well. He has produced a book that is readable, up-to-date and invaluable to the student. In a work of such short compass, it is not possible to give the amount of detail necessary for a profound study of all aspects of the subject. However, the bibliography at the end of each chapter gives sources of reference for further reading, and indicates that the author has made good use of research done in many fields in recent years. It might also be remarked that while describing the development of industry, agriculture, transport, commerce and labour organization, an adequate outline has also been given of prices and economic fluctuations, wages and employment, population and labour supply. Chapters on each of these topics, together with financial institutions, industrial and social legislation, complete the survey of the period. It is to be expected that this work will be generally included in the reading prescribed for students of modern British economic history.

HERBERT BURTON.

The Works and Correspondence of David Ricardo. Edited by Piero Sraffa, with the collaboration of M. H. Dobb. Vol. III. *Pamphlets and Papers, 1809-1811,* Vol. IV. *Pamphlets and Papers, 1815-1823.* (Cambridge University Press, for the Royal Economic Society, 1951.) Pp. viii + 437, viii + 422. 24/- stg. each.

The first volumes of the great Sraffa edition of Ricardo were noticed with awe and admiration in the last issue of the *Economic Record.* It is unnecessary to repeat the general remarks then made about the scholarship of the editor and the magnificent work of the printer.

The present volumes contain the five pamphlets on currency and agriculture which Gonner brought together in the edition generally set for students; the articles on the Funding System and a National Bank; the letters to the *Morning Chronicle,* 1809 and 1810, reprinted some years ago by Hollander; and various writings on the Bullion Report and on the subject of value, from Ricardo's manuscripts. Of the last, a good deal has been previously published, mostly by Hollander, the most important new item being the incomplete paper on "Absolute and Exchangeable Value" on which Ricardo was working just before he died. The ingenuity of editor and printer is again demonstrated (as it was in Volume II, *Notes on Malthus*) in the

method whereby Ricardo's comments on a French translation by Dumont of Bentham's writings on currency are neatly fitted below the reproduced text to which they refer.

The material, new or unfamiliar to most students of Ricardo, does not contain anything which strikingly modifies his position as it was already known. What it does, when brought together, is to emphasize—and this will certainly be even more striking when we have the four volumes of Letters—how *professional* an economist Ricardo was. He must have made his great Stock Exchange fortune on the side, as it were. He has the faults and the virtues of the professional, too—he is very fair to his opponents, but they are always wrong, and they always misunderstand him.

The most considerable of the hitherto unpublished papers is the unfinished argument on "Absolute and Exchangeable Value". Professor E. A. G. Robinson calls this "fascinating", but—apart from its further demonstration, if one were needed, of the attractive candour of Ricardo's mind—it is difficult to see what it adds to already familiar Ricardian material on this subject. He demolishes the labour theory as anything but a general rule for explaining the exchangeable (relative) values of goods produced under conditions which he asserts (or hopes) to be typical of the majority of goods; and he gets nowhere with Absolute Value. The extraordinary fascination which the awkward problem of the increasing value of maturing wine had for the theorists of that generation is worthy of notice by a social historian. Ricardo finds it as difficult as did James Mill and McCulloch. He is polite to McCulloch, but he really need have said no more about his solution than Malthus did later, in one of those occasional sentences which remind us that before he became a Political Economist he had been able to write: "There is nothing that may not be proved by a new definition. A composition of flour, milk, suet and stones is a plum pudding; if by stones be meant plums".

J. A. LA NAUZE.

L'Homme Agent Du Developpement Economique. By Adrien Taymans (Institut de Recherches Economiques et Sociales, Louvain, 1951). Pp. xv + 326. Price not stated.

This is a book which, in addition to several good essays on selected trends in the history of economic doctrines, contains also some interesting excursions into the wide fields of moral philosophy and political science. It is difficult, of course, to imagine a treatment of this subject without recourse to the fields bordering on the purely economic aspects. And there is no doubt that Dr. Taymans, a professor at a Belgian Catholic College, knitted together all the various aspects in a

skilful way, which results in pleasant reading without necessarily contributing anything strikingly new.

The essays contain a description and a discussion of few theories on the importance and activities of entrepreneurs. Dr. Taymans believes that various theories of economic progress fail to allot enough attention to entrepreneurship, and that the available explanation of their importance is by no means satisfactory. In his opinion there is too much talk about "classes" and "homogeneous groups" and not enough emphasis given to individuals. In fact, it is the importance of man, and not of men, which the author stresses throughout his study.

Dr. Taymans' views are strongly influenced by Schumpeter and by Schumpeter's theory of economic development. In view of this factor, quite a number of points of criticism usually levelled at Schumpeter's theory could be usefully repeated in reviewing Dr. Taymans' book. Certain minor views attributed to Schumpeter sound somewhat strangely on the background of his known views, but since he himself read this chapter before publication we must presume that these are his correct views.

The chapters on Marx and Engels are probably the least satisfactory. There are eleven very interesting pages about Gabriel Tarde, who is credited with having formulated several views later amplified by better known Bergson and Schumpeter.

It is disturbing, however, that while the author pleads for more liberty for and recognition of the individual, he fails at the same time to discuss the ability of a society composed of such full-liberty-enjoying individuals to withstand the onslaughts of a closer-organized society. Wouldn't this very liberty lead them to destruction in face of an aggression? Nobody has the right to underestimate the importance of liberty and the irrelevance of many controls and restrictions, but it is certain that enemies of freedom, political and economic, could not be defeated by mere idealistic attempts and by refusals to organize in an efficient way, when such refusals might make encroachments on our otherwise precious freedoms easier.

M. J. GROBTUCH.

William Godwin—A Study in Liberalism.. By David Fleisher (Allen and Unwin, 1951). Pp. 151. 12/6.

Political philosophy as a going concern has its own principle of economy; it prefers to work in the vivid light of a handful of classic texts and to dispense with the illumination of lesser writers. Godwin and his *Political Justice* (1793) have been notably neglected; indeed, both were thought dead by 1800.

Godwin wrote under the stimulus of the ideals of the French Revolution. His leading postulates were the omnipotence of truth, and the rationality, and hence the perfectibility of man. An anarchist, he saw the State as the greatest impediment to social and moral progress: "It lays its hand upon the spring there is in society and puts a stop to its motion". However, representative democracy was a necessary first step to the utopia of small self-governing groups. He condemned both revolutionary tactics and the slow pressure of mass political parties as means. Godwin was unique among eighteenth century democrats in rejecting the language both of "natural rights" and of "selfish interests". He strenuously advocated equality of property and predicted technological advances would bring "something like a final close to the necessity of manual labour". It was this particular prophecy of imminent abundance which led Malthus to write his *Essay on Population* in refutation.

Godwin's excessive rationalism, and the fact that Shelley (his son-in-law) transmuted his whole system into the finer texture of poetry largely explain his neglect. Mr. Fleisher's study, though it has the worthy aim of putting before us a Godwin, lively as ever, full of importance to our own time, cannot be judged very successful. It is very tediously written and only the short discussions of Godwin's affinities to Helvétius and Holbach and of certain contradictions in his system, brought out by the *History of the Commonwealth*, add anything to previous studies. Yet that it is not impossible to catch and pass on the liveliness of Godwin's *Political Justice*, and even to show its relevance to the theory of libertarian socialism was amply shown in Mr. George Woodcock's 1946 biography—a work with which Mr. Fleisher's is a long, unnecessary (and unacknowledged) colloquy.

A. F. DAVIES.

Palace of Industry, 1851. A Study of the Great Exhibition and its Fruits. By C. R. Fay (Cambridge University Press, 1951). Pp. xi + 156. 15/- stg.

This is not exactly a vintage Fay, no doubt because it is to some extent a book for an occasion—a retrospect of the great exhibition of 1851 for readers who, it may be expected, will make some comparisons with the Festival of 1951. It has few of the leaps into apparent inconsequence which may bewilder readers who are not Fay connoisseurs if they are in search of information about Huskisson, and turn to *Huskisson and His Age*. It is nevertheless an excellent little book, amusing yet packed with information, well-proportioned, a vivid reconstruction of a great event of a great age; beautifully illustrated; beautifully produced by the best publishers in England.

Dr. Fay tells the story of the origins of the exhibition, and of the germ and the development of Paxton's palace of glass to house it. He sketches vividly and with intimate knowledge of their period some of the leaders of the project. The Queen's exhibition journal provides a curious chapter. There is a tour of the exhibits in which a well-informed guide may at any moment turn into C. R. Fay. Thus: "North Germany. The exhibits are so few that we have time for something more important, the evolution of the German Zollverein. Where had Germany got to in 1851"? And so on for a paragraph of admirably concentrated economic history.

After reflecting on the impact of the exhibition upon the Victorian age, Dr. Fay concludes with some account of the various scientific institutions in South Kensington which are historically related to the exhibition. The first Appendix, a reprint of *The Times* leader at the close of the exhibition, provides documentary proof that there was an age in which the middle-class could read four or five thousand consecutive words without even sub-headings; and when newspapers could give this space to a leader.

There is much excellent economic history in this little book. It is economic history which is perhaps a little old-fashioned; which assumes that it is relevant to begin a contrast between the ages on either side of 1851 by remarking, "You may remember how Hardy's *The Fiddler of the Reels* develops"; and which assumes that in fact you may remember. Dr. Fay does, however, use statistics. After noting that it was in 1851 that King's College, Cambridge, opened its ranks to outsiders, he remarks: "Within a year the number of matriculations at King's doubled—one freshman in October, 1850, and two in October, 1851".

J. A. LA NAUZE.

Some Accounting Terms and Concepts. A Report of a Joint Exploratory Committee appointed by the Institute of Chartered Accountans in England and Wales and by the National Institute of Economic and Social Research. (Cambridge University Press, 1951.) Pp. 46. 3/- stg.

This is a report of several accountants and economists who collaborated, over a period of some five or six years, in an examination of "the major accounting concepts and of the more important terms commonly used by both accountants and economists", as a preliminary to a closer understanding "regarding the principles applied in their respective fields of work".

The report may appear disappointing in that, despite the sincerity of the intention motivating the discussions, it records that "the vital difference between accountants and economists in their approach to

financial material'' proved an insuperable difficulty in the way of achieving agreement. Consequently, the concepts considered are presented in two differing aspects—that of accounting practice and that of economists' writing. Nevertheless, the document is valuable as a succinct summary of the views of both groups on such concepts as income, capital, the distinction between capital and revenue, valuation of current assets, valuation of fixed assets, surplus and investment. Perhaps the views of each group have been somewhat over-simplified and over-summarized, at least in some respects; for example, although the views presented are broadly representative of the accounting profession, there are many accountants who are not such rigid adherents to the historical cost basis of depreciation as the report might appear to suggest.

The report concludes on a faintly hopeful and slightly positive note: ''Some misunderstandings have been removed; an attempt has been made to avoid inconsistency in terminology that would otherwise foster misunderstanding in the future; and the committee is not without hope that its suggested basic accounting structure and its examinations of the main concepts will result in a closer understanding between the economist and the accountant''.

It is a courageous thing to publish such a report of disagreement and (as it seems at times) of despair; it is to be hoped that the committee will not now retreat from its exploratory expedition, but will make further endeavour to overcome the obstacles which stand in the way of opening up what may ultimately prove to be a very rich field for both accountants and economists.

L. GOLDBERG.

A Course in Applied Economics. By E. H. Phelps Brown (Pitman). Pp. viii + 434. 25/- stg.

There is a large number of texts on theoretical principles for students in the early or middle stages of their degree courses, but there are not so many at the same level attempting to fill some of the ''empty economic boxes'' which the former so neatly construct. Here is a book which does some filling, and is to be welcomed. The choice of topics for such a purpose, and their manner of treatment, are always an open question. In Professor Phelps Brown's choice, ''the problems are all of contemproray importance, and between them they draw on most of the usual divisions of economic analysis, and illustrate its applications in various blends of the abstract and general with the concrete and particular''. (Preface, p.v.) Samples of the topics dealt with are monopoly, equal pay, the price system and collectivism, economic fluctuations, and devalution. The approach laid down by the author to the various subjects dealt with works very well on the whole; certainly he

avoids the extreme of "descriptive economics" or merely cramming the boxes full with bare facts about economic institutions; often, however, he gives us so much of the abstract and general that the blend is rather richer than one might expect to find in a book on applied economics.

The latter point is particularly true of the chapter on "The Pricing Policy of the Public Enterprise". Also, the subject matter of this chapter is still rather speculative and controversial, yet the author has not been able to treat it without leaving the impression that his conclusions are a matter of agreement among economists.

Since this book is likely to become a stock text, it will be permissible to raise a few minor quibbles on its first appearance. One wonders what conceivable use there is in making certain expressions on page 104 equal to the "marginal utility of time". It is difficult to see how time may be regarded as a resource, having utility: it is merely a dimension of resources. On pages 120 and 390 commodities in elastic and inelastic demand are identified with luxuries and necessities respectively, which, depending on the availability of substitutes, may often be very wide of the mark. Then, the discussion of the effects of taxation on the supply of effort seems to ignore, at the foot of page 120, the element of rent in many higher incomes, the concern to maintain merely a relative position on the net income scale, and the "money illusion" in the light of which gross income before tax indicates social prestige (witness the interest taken in the figures of gross income published by the U.S. Federal Treasury). In the notes on further reading attached to the section on economic fluctuations, it is stated that Haberler's *Prosperity and Depression* was completed before the appearance of Keynes' *General Theory*. This is true only of the first edition, not of the second and third. The reference to the chapter in Haberler dealing with "the main features of the record of the cycle" should thus be to chapter 9, not 8. The new chapter 8 deals with literature which "emanates from, and centres around, Mr. Keynes' *General Theoy of Employment, Interest and Money*".[1] The book contains at least seventeen printing errors and the like.

The Australian price is 37/6. It will pay students to order this useful book—from England if possible.

RONALD H. BARBACK.

Work and Welfare in Australia. Studies in Social Economics. By Marjorie Tew (Melbourne University Press). Pp. vii + 236. 9/- Australian.

Work and Welfare in Australia has been written for the reader with no previous knowledge of economics. It is most suitable for

1. G. Haberler, *Prosperity and Depression*, Geneva, 1941 (3rd edition), p. 168.

matriculation standard students and has in fact been recommended for use in the teaching of Victorian matriculation economics.

The field covered is indicated by a list of the selected topics, namely, Population, Housing, Industries and Occupations, Unemployment, Full Employment, Wages, Trade Unions, Socialization of Industry, Effect of Taxation on the Distribution of Incomes and Wealth, Social Welfare. Each topic is considered in a separate chapter, which is complete in itself. Although reference is made to the interrelationship of the various chapters, this method could detract from the unity of the book, which is without a basic theme other than that each topic relates to work and/or welfare. Mrs. Tew has overcome such a disadvantage by her almost routine manner of presenting each chapter. The relevant statistics are given, and as much information as possible is extracted. This is of a descriptive nature, but where necessary, a simple explanation of the theoretical implications is indicated.

There are several reasons why this book provides a good introduction to economics. It interests, because it builds directly on everyday knowledge and experience; it encourages the reader to regard statistics as indispensable aids to knowledge, and it gives the impression, so satisfying to the beginner, that the subject matter has been adequately covered. The chief merit of Mrs. Tew's book is that, while introducing economics, it yet shows very clearly that the practical problems of everyday life are not purely economic and cannot be solved simply by recourse to economic analysis. This is an important point for the young student to grasp. *Work and Welfare in Australia* is adequate for its purpose.

M. RONALDSON.

The Transportation Industries, 1889-1946. By Harold Barger (National Bureau of Economic Research, Inc., New York, 1951). Pp. xvi + 288. $4.00.

This work, whose sub-title is "A Study of Output, Employment and Productivity", is concerned with questions such as "How much transportation service do we (i.e, the United States) use? How much traffic moves and who carries it? How has transportation's place in the economy altered since 1889? . . . What can we say about trends in employment and productivity, in technological progress and in the return to human effort?"

The difficulty in interpreting physical indexes lies in the fact that output, employment and productivity are affected by the operations of both suppliers and consumers, while the indexes themselves offer little help in determining the most important influence at a particular period. Professor Barger has accumulated much descriptive material,

as well as many indexes, and the results, while often inconclusive, are interesting. One conclusion chosen at random by the reviewer is the mainly steady and sometimes rapid increase in output per worker since 1889 in the majority of the services considered—especially in the steam railroads. In this case there is some attention given to the types of workers to be considered, as well as the particular types of capital they work with. One inference drawn from these results is that the increase in productivity was determined to a great extent by technological changes of the labour saving kind. Other conclusions are as to the large degree of competition that evidently exists within the industry as a whole; and the continued importance of the railroads. The evidence of the Road Research Board in Britain on the declining part that railways play in British transportation could be used in this connection for comparison.

The quantitative findings of the study are useful adjuncts to the theoretical side of transportation economics, e.g. the discussion of revenue per ton-mile (pp. 19-22) and the study of the output-equipment ratio in railroads (Chapter 4).

In the lengthy Appendices A and C the book contains details of the construction of physical output indexes for public utilities, and the discussion of method and difficulties is to be recommended to those researchers in a field relatively neglected in Australia and New Zealand. As well as the number of figures—both raw and refined—to be assimilated, the study has numerous clear and extremely well presented graphs. The writer follows the useful practise of inserting a summary of conclusions in the beginning of the book.

C. A. BLYTH.

Review of Economic Conditions in the Middle East; Supplement to World Economic Report, 1949-50. (United Nations, March, 1951.) Pp. viii + 84. 7/6 sterling.

This review, prepared by the Secretariat of the Department of Economic Affairs of the United Nations, is an admirable and succinct report on the basic physical, economic and social characteristics of the Middle East and on the main economic trends.

The report emphasizes the cultural unity of the region and stresses the looseness of economic ties and the similarity in physical resources which makes it difficult to develop intra-regional trade. This situation, and low standards of living among a rapidly growing population, illiteracy, the paucity of known mineral resources apart from oil, a marked shortage of capital, the inadequacy of techniques and technical personnel, and prevailing economic and social stratification present serious obstacles to economic development. A timely discussion on the place of petroleum in the economy of the region indicates the small extent to

which it has contributed to economic development and social advancement. A final section on the requirements for economic development throws no new light on the problems, but produces a useful summary. There is a statistical appendix of some fifty tables.

More might have been made of the refugee problem as a major source of political unrest and economic dislocation, of the insecure foundations of the economy of Israel in the prevailing situation, and of the widespread suspicion of and antipathy against the West—of which the situation in Iran and Egypt are overt expressions—which are no less impediments to the international collaboration necessary for the economic development of the region because there is also fear and suspicion of the U.S.S.R.

While there are a number of publications which are more comprehensive or deal more thoroughly with particular problems or countries in the Middle East, the report succeeds in outlining the framework within which economic development must be considered.

H. BELSHAW.

Review of Economic Conditions in Africa. (United Nations Department of Economic Affairs.) Pp. 119. 9/- stg.

This survey, prepared at the request of the United Nations Economic and Social Council, and issued as a supplement to *World Economic Report, 1949-50,* maintains the usual high standard of publications of the United Nations Secretariat, despite special difficulties attending any description of the African scene. For that Africa is still the Dark Continent is clearly shown by such facts as that (i) more than half its countries have never held a census (vital statistics being available only for the white population of the Union and of one or two other countries further north, and other statistics being even more meagre); (ii) there is a complete absence of railways and even roads over wide areas of the continent not served by navigable rivers (so that there is still much dependence on human porterage); and (iii) the demographic situation, except in those very small areas of the continent where there have been substantial improvements in the arts of production, is characterized by high fertility, by very little reduction in infant mortality (or other death) rates, and by consequential heavy pressure of population on the means of subsistence (in consequence of which the population's median age is believed to be as low as 18 years).

The continent contains 200 million people (representing eight per cent. of the world's population), occupying 23 per cent. of the world's land area. The Sahara constitutes so serious a barrier to trade that North Africa has more community of interest with Europe via the Mediterranean than it enjoys with the rest of Africa.

The *Review* outlines, besides the above facts, the basic characteristics of the African economy, with special reference to recent trends in farm production, mining and the metal industries, the furnishing of fuel and power, secondary industries, transportation, labour conditions, and international trade; which generally indicate somewhat higher levels of activity as a result mainly of increased world demands for primary products. To raise much further present levels of production and consumption seemingly requires heavy and sustained capital investment and extensive reorganization of the traditional economy; and there is an ever-present danger that further capital investment devoted mainly to the development of primary production *for export* may cause a one-sided development unless more external capital than has been available in the past is applied to the fruitful exploitation *for internal needs* of the continent's vast natural resources.

There are 70 tables and 1 map. A fairly full table of contents largely atones for the absence of an index.

E. P. NEALE.

Payment by Results. (I.L.O., Geneva.) Pp. 204. 7/6.

This is an excellent comparative study of the nature of incentive payment systems, and their present extent in a large number of countries. It is based on a special enquiry directed by the I.L.O. to governments and industrial organizations. Its findings are of value only if they are considered as a whole and few are capable of this—some lacking practical experience, some lacking analytical training and many seeing in incentive systems an opportunity for exploitation. A Polish graduate in economics who, by force of circumstances, works in an Australian factory on a bonus system, said of it: "It suits me well enough, but you need to have both theory and practical experience to know who gets the biggest share". The I.L.O. study gives adequate space to the discussion of safeguards, but those who lack practical experience may miss their significance.

The graphs which compare earnings and labour costs under various complex systems are most effectively drawn and the general study of principles is excellent. The study of the extent to which these systems are applied is necessarily affected by incomplete returns and disparate conditions. One's first reaction is: "How little change there has been in (say) thirty years". The countries beyond the "Iron Curtain" and some newly independent show some spectacular increases. It seems generally obvious that these systems have virtues which make them applicable to certain industries and that attempts to apply them more generally are foredoomed. Unless special conditions make them obligatory, as in coal hewing, the worker and his union will rightly refuse to

accept a system where the earner cannot readily calculate his own earnings.

It is astonishing to find that in metal trade, coal cutting and textiles (the three industries most affected the world over), the proportion of British workers paid by results (40 per cent.) is about twice that found in the United States; that is, unless one remembers that efficacy depends on the workers' educational standards. For similar reasons, straight piece-work prevails over fancy systems.

It would be better if the chapter on advantages and disadvantages came before the detailed analysis. It is definitely a work to be studied as a whole, as it gives an excellent blend of actual cases and general principles.

K. M. DALLAS.

Collective Bargaining. By Neil W. Chamberlain (McGraw-Hill, 1951). Pp. vii + 534.

Teachers in the field of labour economics have long felt the need for some modern study which bridges the gap between the rather arid theoretical models of such writers as Professor Dunlop, on the one hand, and the mass of institutional studies on the other hand. Existing studies are too elementary, or out of date, or unsatisfactory in some other respect. Though the emphasis in Professor Chamberlain's book is on the institutional side, it nevertheless goes some way towards bridging the gap.

The book begins with a short history of collective bargaining in the United States and goes on to consider conference and grievance procedures, the bargaining process, the nature of the collective agreement, the bargaining unit, bargaining power, the politics, law, subject-matter and economics of collective bargaining, the relation between collective bargaining and union management co-operation, and the role of collective bargaining in American society.

Theoretical economists have tended to build their theories of industrial relations on the foundations of conventional value theory. Institutional studies, however, suggest that new foundations are required. It is likely that these new foundations should include:—(a) use of the group rather than the individual as a basis; (b) adequate stress on producer as compared with consumer interests; (c) adequate weight to non-wage objectives of workers; (d) consideration of the relations between the factory group and local and central trade union authorities; and (e) recognition of the important developments, often unrecognized by either party, in the direction of trade union participation in management.

The significance of elements such as these is fully appreciated by Professor Chamberlain and he partly succeeds in developing a

systematic theory of collective bargaining from them. The economic theorist will doubtless feel that the required theoretical work has only just begun. The Australian reader will regret that the analysis is so closely tied to the American scene. Nevertheless, even in its present stage the theory appears to be an important step forward, and one which could be applied more widely, for example, to an analysis of the Australian arbitration system.

Even though the book lacks comprehensiveness because of limitation of its subject-matter to collective bargaining, broadly interpreted, it should prove a most useful text for courses in labour economics. It has, too, sufficient originality to be regarded as much more than a text and must be adjudged a worthy addition to the excellent work coming from the Yale Labour and Management Centre.

KINGSLEY LAFFER.

Effects of Taxation. Corporate Mergers. By J. Keith Butters, John Lintner and William L. Cary, assisted by Powell Niland (Harvard Business School). Pp. xviii + 364. $4.25.

This book is the second in the series arising from the research programme on the effects of taxation on various phases of business activity, conducted through the Harvard Graduate School of Business Administration.

The objective of the study is to assess the relative importance of federal taxation in the resurgence of merger activity in the United States in the period 1940-49. (The term merger is used "in an inclusive sense to refer to all combinations of formerly independent companies and not in a restrictive legal or technical sense").

As taxation is only one of the many forces which may precipitate a merger, the book inevitably develops into a general study of corporate mergers, and is thus of interest to those who are not specifically conncerned with taxation problems. This is especially so as the discussion of taxation law and its interpretation is confined to an absolute minimum.

The conclusion drawn from the detailed study of 104 mergers in the period 1940-49, and a statistical analysis of all reported mergers in the eight years 1940-47, is that taxation was the predominant cause of the sale of a considerable number of closely held companies in the $5-25 million asset class. In general, however, the role of taxes in this respect was much more limited in scope than is frequently claimed, and because of a relief provision in the Revenue Act of 1950, will be more restricted in future.

The authors also show that the recent merger movement has had little effect on industrial concentration, for in contrast with earlier

large scale merger movements which were characterised by numerous mergers of large companies with each other, in recent years large companies have acquired predominantly small firms.

J. McB. GRANT.

Kentucky Taxes Affecting Life Insurance. By C. R. Lockyer (University of Kentucky, 1950). Pp. vi + 68.

Besides describing various taxes on life assurance in Kentucky, this study attempts to appraise the fiscal burden, and in particular, whether inheritance tax on insurance proceeds payable to named beneficiaries reduces the volume of business written. If so, it would decrease revenue from taxes on insurance premiums. Inheritance and premium taxes are to some degree alternatives. The possibility is that raising exemptions from inheritance tax might result in greater revenue from the premium tax than is lost from the inheritance tax.

The analysis is necessarily sketchy in 42 pages plus 26 pages of appendices, but it does outline the main taxes used and reach some conclusions. In respect of the alternative revenue from inheritance and premium taxes, it is suggested that to raise the existing exemption of $20,000 of proceeds of policies payable to designated beneficiaries to $40,000 would involve a loss of revenue from inheritance tax, which would be balanced by a gain in premium taxation if premiums rose by 6½ per cent. These figures depend on particular circumstances, but do indicate the relation between the various kinds of taxes and related exemptions. The matter of treating premiums as a deduction for income tax purposes is another aspect which would be relevant to any similar study in this country.

Since it is possible to raise the same revenue from a number of alternative taxes, it is important to study their different effects on the amount of life insurance written, and on the proportions of premiums and of tax which come from savings and from spending. The Kentucky study does not do more than suggest the line of research which would be useful in Australia.

A slender paper of the "Municipal Technical Service" of Tennesee contains an article on the Louisville Payroll Tax, by J. W. Martin, of the Kentucky University. He tells how the City of Louisville thought it had no power to levy a tax measured in any way by personal income. But when revenue was sorely needed after the war it was realized that income tax would hinder the economy less than business and property taxes, and it was found possible to levy a payroll tax.

This was constitutional because of a legal distinction between a tax imposed on income, and tax imposed on the privilege of doing business and measured by income. Under the latter category a payroll

tax of 1 per cent. on each person's receipts from carrying on his occupation in Louisville has been upheld at law—even in respect of employees of the Federal Government—has raised about $4,000,000 a year in a city of about half a million people, and its sponsor has been re-elected mayor.

GORDON BRUNS.

The Corporation Income Tax. By Richard Goode (John Wiley, New York, 1951). Pp. xiii + 242. $3.00.

Budgetary Structure and Classification of Government Accounts. United Nations Publication Sales No. 1951, xvi 3. (H. A. Goddard Pty. Ltd., Sydney). Pp. 100. 5/- sterling.

Professor Goode's *The Corporation Income Tax* fills an important gap in the study of public finance. Hitherto discussion of this important subject has been superficial and fragmentary. There has been no convincing reply to the popular claim that the tax on company incomes, in addition to the personal income tax, is both unjust and economically unsound.

There are three significant features in Professor Goode's treatment of the corporation tax. First, he discusses the problem in the context of clearly defined objectives of fiscal policy. These are a reasonable degree of equality of income, wealth and economic power; full employment; and a high and stable real income.

Second, comparisons are made wherever possible with the effects of alternative taxes. This facilitates a more balanced assessment of the place of the corporation tax in the tax structure.

Third, the study probes widely and deeply into the effects of the tax on the distribution of income and wealth, on prices and wage rates, on savings, consumption and investment, and on national income and the level of employment. Quantitative estimates are made of some of these effects, although the author uses statistics cautiously and with reservations.

In his discussion of the effects of the tax on prices and wages, the author adopts the distinction between short-term effects (incidence) and the long-run effects. In the short-run the classical conclusion is confirmed, viz. that the tax sticks on the corporation. In the long-run, however, the question is indeterminate. Much depends on the state of total effective demand—a point which has been neglected in the traditional approach, and which Professor Goode himself had emphasized earlier in an article in the *American Economic Review*, March 1945.

The author shows complete awareness of the inevitable conflict between equity, fiscal expediency and administrative convenience in

all taxes. After detailed examination of the various effects of the corporation income tax, Professor Goode concludes that from the point of view of meeting the objectives of policy, stated above, the corporation income tax is second best only to the personal income tax. From the standpoint of equity, the former lacks the refinements of a well framed progressive personal income tax. But a complete integration of these two taxes presents serious administrative obstacles. Further, in view of the revenue requirements of modern governments, some diversity in the tax structure is desirable. The unfavourable effects of meeting the whole of these requirements from a higher progressive personal income tax suggest that in spite of its imperfections, the corporation income tax should supplement and exist alongside the personal income tax. Professor Goode also reaches the conclusion, based on deductive and statistical analyses, that the depressive impact of the corporation income tax is likely to be greater on the incentive to invest than on the propensity to consume. The opposite is probably the case with other taxes. This raises an important issue for economic policy in relation to the composition of national output.

This book should be of great interest to Australian students of public finance. Australia is, in general, similarly situated to the United States in respect of company taxation provisions, and of the constitutional and economic importance of the modern corporation.

One small correction. In his reference to Australian company tax, the author has obviously used old source material when he says (p. 9) that in Australia personal and corporate income taxes are partly integrated. In fact, of course, the Australian company tax has, for some time, been distinct from and in addition to the tax on personal income.

To those of us who have battled hard to get an economically meaningful picture from Australian budgets, the publication of the United Nations' monograph, *Budgetary Structure and Classification of Government Accounts* comes as a ray of hope.

The object of the study is to suggest a system of budgetary classification which (a) covers all the financial activities of the Government; (b) meets the requirements of effective administrative control; (c) assists in the proper evaluation of fiscal policy; and (d) facilitates international budgetary comparisons.

A tentative model is suggested in which *inter alia* the distinction is made between current and capital accounts. However, the study emphasizes that this distinction should not by itself serve as a guide to fiscal policy.

The main weakness of this study is its brevity. Unlike other United Nations publications, it assumes that the reader has a detailed knowledge of a specialized field of economics. A fuller discussion

of the various applications of budgetary information would have greatly increased the value of this publication.

A number of appendices deal in summary form with the budget systems of Italy, Sweden, the U.S.A. and the U.S.S.R.

J. E. ISAAC.

Finance of the Government of India. By R. N. Poduval (Premier Publishing Co., Delhi). Pp. 322 (including four-page index). Rs. 12/8.

Dr. Poduval (a graduate of London University) is Reader in Economics at the University of Madras.

This work (which is almost entirely free from the faults of printing and expression that marred so many of the earlier English language economics works published in India) confines its treatment to the period following the passing of the Government of India Act, 1935; since when (apart from World War II) the main events have been the separation of Burma and the introduction of provincial autonomy in 1937 (under the Indian Independence Act, 1947), the separation in three large disunited areas of one-third of the total original area and one-fourth of the total population, as the largely agricultural Pakistan (whereas India remains primarily industrial); and finally the adoption of the constitution of 1950, under which India became a sovereign democratic republic.

The volume under review should prove a useful work of reference to antipodean readers interested in such questions as the division of functions between the Central Government and the States; the suitability as a source of revenue in such comparatively undeveloped and illiterate countries of excise duties (such as those on betel nuts, cloth, coffee, tea, kerosene, matches, motor spirits, tyres and tubes, steel ingots, salt, sugar, tobacco, cigarettes) and of the profits of such government trading departments as the mint, the post and telegraphs, the railways (there is little competition from motor vehicles), etc.; methods by which the London debt was reduced in the early years of the last war to only 3 per cent. of the original figure and by which in the past two or three years there has been a recourse to dollar loans.

It appears that one-third of India's war effort was financed through inflationary methods, such as increases of the money supply, rather than by taxation or by loans out of genuine savings; also that inflationary influences continued long into the transition period because of the feverish demand for houses and other capital and consumer goods pent up during the war, continued heavy expenditure on the army over the period of mass migrations following the partition,

etc., despite efforts to secure more revenue by taxing incomes. Amongst the factors militating against the success of Government measures designed to increase the volume of production, our author is perhaps too near to the Indian scene to stress adequately the many obstacles, such as archaic customs and religious superstitions that are legacies of India's long-distant past, which are a bar to achieving the best possible utilization of natural resources, coping adequately with pests, and adopting various other progressive measures.

E. P. NEALE.

War Finance in Canada (*Les Finances de Guerre du Canada*). By Jean-Pierre Martin (Librairie Armand Colin, Paris, 1951). Pp. vi + 212. 600 frs.

In this book Mr. Martin has written a history and evaluation of the war-time financial experience of Canada. He has managed to present what seems to the reviewer a very full account of the years 1939-1946. It is interesting to find the story carried on to the post-war years, and to see how the exceptional financial and productive efforts of the war were led back safely to a semi-controlled peace-time economy.

What strikes a person acquainted with Australian war-time development most forcibly, is the similarity in the organization of the war effort in the two countries—even down to the complicated financial arrangements between the Commonwealth and States in Australia and the Dominion-Provincial relationships in Canada.

Told in bold figures, the story makes impressive reading. First, there was the material effort put in by Canada which produced war goods for the U.S.A. and U.K. on a large scale, besides providing equipment for her own forces. Other countries, such as Australia, under the Mutual Aid Scheme, also benefited from Canada's effort. Less well known here is Canada's war-time ship building programme of 3·5 million tons of merchant ships besides an array of warships.

The same boldness and energy has characterised Canada's dealing with her financial problems. Expenditure of the public sector increased from $680 million in 1939-40 to $5,322 million in 1943-44, after which it was maintained at about that level. But, during the whole war period, "controllable" non-war expenditure remained practically unaltered.

It was the aim of the Government to finance as much of the war expenditure as was feasible out of taxation. With the exception of 1944-45, taxation income reached at least 50 per cent. of the total expenditure. The rest was obtained by borrowing on the internal market at lower than pre-war rates of interest.

The book is completed by a chapter on controls, pointing out their importance for achieving a sane war and post-war economic development in Canada.

S. P. STEVENS.

Effects of Taxation on Executives. By Thomas H. Sanders. Pp. xiii + 229. $3.25.

Effects of Taxation: Executive Compensation and Retirement Plans. By Challis H. Hall. Pp. xv + 365. $4.25.

(Division of Research, Graduate School of Business Administration, Harvard, 1951).

Through its influence on the behaviour of individuals, taxation is becoming more and more important as a determinant of trends of change in the organization of production. A systematic treatment of the subject from this point of view, as a corrective for exclusive preoccupation with taxation as a means of redistributing income and as a determinant of the level of employment, has been needed for a long time. The Faculty of the Harvard Business School, in its programme of study of the effects on contemporary trends of changes in the structure and impact of taxes, has set out to supply this need. These two books are the third and fourth in a series of publications on tax effects resulting from its research programme.

Professor Sanders has produced a most readable and informative account of the character and behaviour of top-line American business executives and their immediate subordinates, and their reaction to recent tax developments. Since it is impossible to isolate tax effects from the effects of other influences contributing to changes in individual and collective patterns of behaviour, the work is prefaced by a detailed study of the executive's day-to-day job. American entrepreneurship in action is vividly described, and none of the threads taken up in this section are lost in the course of the book. For the Australian and New Zealand student it may be equally valuable as a study of the environmental influences affecting the principal agents of industrial growth, and as a study in tax effects. The analysis of types of executives, differentiated by industry, grade, locality, mobility, etc., and the influences to which the different types are particularly susceptible, is most illuminating. It offers a pattern which could serve as a basis for the study of a neglected aspect of economic growth in our more backward economies. The selection of data from company accounts, reports, lawsuits, official documents, and especially the use made of interviews and unofficial contacts with business men, show that Professor Sanders is at home with his subject.

The investigation into tax effects can lead to no determinate conclusions because tax effects cannot be isolated from the effects of other

influences. Even in cases where it can be shown that tax influence predominates, few generalizations can be established. However, the weight of the evidence supports the presumption that high taxation of personal and company incomes brought about a slackening of effort in some cases, though in general executives worked as hard as ever. The mobility of executives was reduced, mainly because an inordinate increase in paid-out salary was necessary to yield a salary after tax which would induce a first-class man to transfer. It appeared that the long-run effect of the impairment of incentive must be to reduce the effective supply of competent executives. This, of course, would be the most important long-run effect, but in the short run the most important loss of productive effort was due to time lost and personal wear-and-tear suffered in studying the "tax angles" of every executive decision.

It emerges from Professor Sanders' work that the outlook and behaviour of executives is profoundly influenced by the opportunities of securing a competence for retirement. Owing to high taxation since 1940, savings out of income can hardly be sufficient to enable an executive to maintain his customary standard of living after retirement. (That is, unless he is old enough to have accumulated a competence before 1940, and is not old enough for it to have been wiped out in 1930.) Results have been: a greater interest in capital gains (subject to 25 per cent. tax); a phenomenal growth in contributory pension schemes, where funds subscribed have been tax free up to the point where pensions are received; and, more especially since the Revenue Act of 1950, more attention to stock options and stock purchase plans and other forms of risk-and-profit sharing. The general significance of these developments is considered by Professor Sanders. In Professor Hall's book they are analysed in detail from a specialist point of view.

K. A. BLAKEY.

Labour and Industrial Relations: A General Analysis. By Richard A. Lester (Macmillan, New York, 1951). Pp. x + 413. $4.25.

Intended as a text-book in industrial relations, this work has the advantage of being written almost without jargon and of containing a good deal of factual information. For those who favour the "problem" approach to industrial relations, it can be recommended as a text. But if one is interested in the forces that make labour tick, one won't get much assistance here.

Lester has two main aims, which constantly clash in the text. He wishes to give "a realistic explanation of union and management behaviour" which would take into account "social, political and psychological as well as economic aspects". But he also wants to show how "workable solutions" in this field must be arrived at. The result

is that his theory is weak and his solutions are vague and platitudinous. On the other hand, if one treats the book merely as a work of reference, the factual part is broadly based and well organized.

By far the weakest part is the first, which is supposed to provide the "analytical foundations". Lester's main theme here is that market price is frequently inefficient, and at times absolutely ineffective, as a governor in industrial relations. Because of the special characteristics of labour, demand and supply operate to some extent independently of price, and market forces function only outside significant areas of indeterminancy. This attack on the automatic application of the apparatus of commodity-market analysis to industrial relations is well worked out. The trouble is that there is no systematic indication in what fields, and to what extent, psychological and political factors have to be taken into account. When the student has read this section he will know that the issues are "exceedingly complex and do not yield to simple, unqualified answers", but he won't know very much more. Apparently economic, political and psychological factors are to be "considered" whenever "insight" indicates it. The methodology in this part is little more than a vulgarization of the old German "understanding" or "empathy" approach.

The other parts are much better since they are less ambitious. There are good summaries of union and management structures and the development of public policy on industrial relations. The factual chapters are uneven—the summary of the history of the Labour movement is very poor, but the chapters on collective bargaining and labour monopoly are perhaps the best in the whole work.

It is in the concluding part, where an attempt is made to work out a "philosophy of industrial relations" that Lester's weaknesses come out most clearly. Surely it is question begging to tell us that "persons may differ in their ultimate conclusions, but not on the basic elements upon which a philosophy of industrial relations must rest—at least for our kind of political and economic system". On examination these "basic elements" are so vague that apparent agreement on them rests on their lack of content: We must have "workable compromise" and the "insights to be gained from all the social sciences" will help us to implement this. It never occurs to the author that some of these "insights" might tell us that workable compromise in some fields is impossible and utopian. True, there is less moralizing in this book than in some others on the same subject, and at times some of the promised realism makes its appearance. But the author does not really feel comfortable in a realist approach, and, wherever possible, immediately looks the other way.

HENRY MAYER.

Imperialism and Social Classes. By Joseph A. Schumpeter. Translated by Heinz Norden. Edited and with an Introduction by Paul M. Sweezy. (Blackwell, Oxford, 1951). Pp. xxv + 221. 20/- stg.

The late Prof. Schumpeter's *Capitalism, Socialism and Democracy* was a deserved success, both with the general public and with social scientists. It was fascinating to learn what the world looked like to a thinker who was sympathetic and highly sophisticated, yet who had such an easy conscience about economic privilege. His point of view is more readily understood in the light of articles published since his death. Schumpeter was born a bourgeois. But his training was that of a pre-1914 continental aristocrat. He was not torn (as we are, whether we know it or not) between the conflicting values of the middle class and the working class: the inner moral tension for him was between bourgeois values and aristocratic values. His synthesis suggests that he felt the tension keenly, more so perhaps than any equally subtle thinker since de Tocqueville. But when the problem of class loyalty presents itself in this form, it is, at least, easy to choose between the competing standpoints of the bourgeoisie and the proletariat—so easy, in fact, that Schumpeter, not needing to shout in order to convince himself, could see most of the issues involved with a truly enviable clarity.

The same vantage point may partly explain the quality of the two essays which have now been translated. That on imperialism, first published in 1919, is a brilliant contribution to the literature of the subject, and though Schumpeter's views appear to have changed somewhat, Mr. Sweezy is almost certainly right in thinking that developments of his thought could largely have been reconciled with what is said here. The doctrinaire socialist regards foreign aggression as a mere by-product of the inner necessities, economic or social, of the capitalist system. The Manchester man sees a sharp contrast between rational, welfare-seeking capitalism and irrational, power-seeking imperialism. Schumpeter's objectivity allowed him to avoid these gross simplifications. Elsewhere he had refused to assume that the entrepreneur was a calculating hedonist. Likewise he regards the drive behind imperialism as being, basically, the wish to conquer for conquest's sake. Egos may be expressed through military aggression if a people or class have earlier become warriors in order to win their freedom or to repel attacks. For "psychological dispositions and social structures acquired in the dim past in such situations, once firmly established, tend to maintain themselves and to continue in effect long after they have lost their meaning and their life-preserving function" (pp. 83-4). The need of a ruling class to consolidate its position, or sectional interests who gain by war, may help to keep

the aggressive attitude going. But the capitalist outlook is essentially anti-militarist, and peace parties are strongest where it is most firmly entrenched. "It may be stated as being beyond controversy that where free trade prevails *no* class has an interest in forcible expansion as such. . . . Not even monopoly interests—if they existed—would be disposed toward imperialism in such a case. For under free trade only *international* cartels would be possible" (pp. 99-100, author's italics).

Protection does not change things directly. It does, however, facilitate the forming of *national* cartels and trusts. These raise prices at home, which means that they must produce less, and lose the advantages of large-scale production, unless they are able to dump abroad. Further, they run into trouble with workers and consumers; hence nations come to compete in exporting capital as well as goods. "Everywhere except, significantly, in England, there has come into being a close alliance between high finance and the cartel magnates, often going as far as personal identity. . . Here capitalism has found a central organ that supplants its automatism by conscious decisions. In the second place, the interests of the big banks coincide with those of their depositors even less than do the interests of cartel leaders with those of the firms belonging to the cartel" (pp. 106-7). In these circumstances the political control of territory *does* matter to high finance. But neither the workers nor capitalists as a class will benefit. When the bourgeoise is imperialist it is only because of its inability to shape a fully bourgeois philosophy. Hence, when it seeks the help of the monarchical state, it often adopts the latter's ideology, even though this be directly opposed to its own interests.

Schumpeter does not discuss the possibility, under modern conditions, of exploiting a subject people by taxing them, seizing their property and conscripting their services wherever expedient. Nor does he discuss the account of imperialism often associated with underconsumption theories of the trade cycle. But these are hardly deficiencies considering the date when the essay was written. Short though it is, it contains a wealth of factual material, including a masterly chapter on the role of imperialism in British politics. Comment here must concentrate on a detail; one may doubt whether Utilitarianism was, on the whole, a force making against imperialism. Bentham changed his mind about emancipating colonies, while the Mills' link with India, and Bowring's part in the Opium War are well known. Roebuck and Molesworth may have supported the rising in Canada, but they were prominent imperialists ever afterwards. On the other hand, if the constructive efforts of Wakefield and Buller were not imperialism in Schumpeter's sense, all such efforts had implications for foreign policy and hindered the growth of a general anti-imperialist

sentiment. The real leaders in this regard were Bright and Cobden, who were little influenced by the Philosophical Radicals, however much they welcomed their help in the struggle against the corn laws.

The paper on social classes provides sociologists and economic historians with an excellent framework for detailed studies. Rising, within a class or between classes, depends almost wholly, and always has depended, on having the qualities needed for leadership. In the industrial middle class, what is called for is the ability to innovate. Frugality and the careful following of routine will not even suffice to maintain the position currently held. This, of course, accords with the picture of the entrepreneur in Schumpeter's economics. Lastly, classes themselves rise and fall according to how they discharge their special functions, and along with changes in the importance of those functions. Here is a broad picture which stresses social mobility, yet is not inconsistent with the major insights of Marx or Veblen.

KENNETH RIVETT.

Ausgleichsgesetze der Amerikanischen Zahlungsbilanz (Laws of Adjustment of the American Balance of Payments). By Jürg Niehans. (A. Francke, A. G. Verlag, Berne, 1951). Pp. 173. S. frs. 9.50.

The sub-title of this book: "From general price theory to quantitative forecast", suggests its division into two parts. The first part deals with the underlying problem of price theory, the second with the quantitative solution. Stress is laid not on U.S. policy, but on the policy of other countries concerning their balance of payments with the U.S. The aim of the book is to find the equilibrating trends, as they were in the spring of 1950, how the U.S. balance of payment changes, if foreign countries increase the supply of those commodities which are now sold by them to U.S., quality and technique of production of these imported goods remaining constant.

Both parts of the book are based on very extensive, mainly British and American literature, as interpreted by the author. The core of the first part is chapter 2, dealing with price theoretical measuring rods. The writer distinguishes between primary "near effects" (Nahwirkungen), i.e. the effects of a change of supply of an imported commodity on price and quantity of that particular commodity, and secondary near effects, i.e. the effects of an increase in imported supplies of a good on purchasing and selling intentions regarding other goods. The final category are "remote effects" (Fernwirkungen), indirect effects of the market changes which have been caused by the near effects.

The third chapter discusses the investigation of symptoms as bridge between theory and statistics. "Models" under certain

assumptions have replaced former theories, making the theory more and more abstract, general and poor in contents, so that it has hardly progressed beyond a general theory of prices. Super-individual magnitudes (aggregates), the subject of statistics, cannot be parts of a theory, but only part of an approach through symptoms, an essentially inaccurate approach by way of "indicators" (national income, number of people in employment, quantity of money, of savings) as symptoms. Some criteria for the right choice of indicators are suggested. As the remote effects of foreign trade are very complex, only the most primitive statistical methods seem suitable to estimate the U.S. price elasticity of imports.

In the second quantitative-statistical part of the book the problem is to find how changes in prices come about through shifts in supply, not in demand. On the whole it can be said the elasticity of demand is lower when the consumer chooses between imports and home products, higher when the entrepreneur does. The demand for foodstuffs is inelastic, that for industrial raw materials and semi-processed goods is elastic. Among manufactured goods various elasticities about compensate one another.

In a chapter on remote effects the assumption is a reduction of sales on the home market by $1.5 milliards per annum, and the problem is to ascertain the reaction of the U.S. demand for foreign imports and supply of export goods to this initial disequilibrium.

Various calculations lead to the result that the remote effects on the supply of U.S. exports are very small; so are the remote effects on future demand, particularly as there is a secular trend in U.S. to make imports a continuously decreasing share of the national income, quite independently of the trade cycle. Since the 1920's U.S. consumers' habits have gradually moved away from traditional foreign import commodities, and technical progress since 1918 has been much greater in U.S. than in Europe.

In conclusion, the author works out seven theses about countermeasures to be taken by European countries to adjust the balance of payments. (1) Remote effects on the U.S. demand and supply play an inconsiderable part in the adjustment of the balance of payments. (2) To raise the U.S. demand for foreign currency, the increase in the supply of European export goods must be selective, the supply of goods with an elastic demand is to be increased, and of those with inelastic demand to be reduced. (3) The reduction of foreign export prices should be equally selective. (4) The reduction of U.S. import duties, if not offset by concessions to be made by non-American countries, would raise the U.S. demand for foreign currency in any case, particularly if it leads to increased purchases of foreign goods substantially at the expense of home products. (5) Foreign

capital investments, even at a high rate of interest and profits, could attract U.S. investors only if their insecurity is lessened. (6) All these measures could not change the basic trend of decrease of imports into U.S. If continuously repeated, they would defeat their own purpose. (7) To restore the balance of payment equilibrium, European countries would have to create newly invented goods in increasing waves, until there is again equality in technical progress with U.S. What is needed is not progress that reduces costs, but progress creating new products or styles or improving the old ones. Unless this can be achieved, the problem of the U.S. balance of payments is insoluble without further sacrifice in welfare and probably in freedom.

On the whole the book under review, although perhaps not quite original, is a scholarly and very thorough interpretation of well selected literature, very often debatable, particularly in the final theses, but most stimulating and worth reading.

F. SCHNIERER.

BOOKS RECEIVED

A.—AUSTRALIAN AND NEW ZEALAND PUBLICATIONS.

DICKINSON, S. B.: *Australian Steel.*

A report on the present position and the possibilities of development of the industry by the South Australian Director of Mines and Government Geologist.

HOCKING, D. M. and HADDON--CAVE, C. P.: *Air Transport in Australia* (Australian Institute of International Affairs, Angus & Robertson, Sydney, 1951). 25/-.

To be reviewed.

The New Zealand Economy, 1939-1951. Presented by the Prime Minister and Minister for Finance. (The Treasury, Wellington, C.1, New Zealand.)

This is a study of the New Zealand economy in its changing aspects from 1939 to 1951, presented to Parliament by the Prime Minister, as Minister for Finance. Apart from a series of tables covering various aspects of the New Zealand economy, it consists of nine chapters dealing with population, employment and production, investment, external trade, monetary development, and the problem of inflation, etc.

RESEARCH SERVICE: *Coal Balance Sheet for 1951* (Research Service, Sydney, 1951).

A statement of the trends which determined supplies of New South Wales coal during 1951, with an examination of demand, of external trade and of the reasons for the inadequacy of supply.

RESEARCH SERVICE: *Australia's Trade and the Sterling Crisis* (Research Service, Sydney, 1952.)

An examination of prospects and policies for Australia in international trade, with particular reference to her sterling area membership. Since this study was completed on January 24th, 1952, the important changes that have occurred have already tended both to enhance its importance and to give point to some of the critical remarks contained in it.

B.—OTHER PUBLICATIONS.

ANDREWS, P. W. S. and BRUNNER, ELIZABETH: *Capital Development in Steel* (Basil Blackwell, Oxford, 1951). 30/-.

To be reviewed.

ARNOLD BRUNO: *Die Grundlagen der Tarifpolitik für den Nordostseekanal* (Kiel University, 1951). D.M. 5.

The author begins this study by considering the general basis of the tariff policy of the Canal, and after discussing the commerce that passes through the Canal, outlines the financial results of the policy that has been adopted. He concludes with proposals for a new form of tariff.

Baltimore in Export Trade (Bureau of Business and Economic Research, University of Maryland, 1951).

A short sketch of the export trade of one of the major ports of the United States.

Baltimore in Import Competition (Bureau of Business and Economic Research, University of Maryland, 1951).

A companion study to that dealing with the export trade of this port.

BIEHL, MAX.: *Das Zahlungsbilanzproblem der Vereinigten Staaten und Deutschlands Dollar-Ausfuhr* (Kiel University, 1951).

The author discusses the balance of payments problem of the United States, both from the point of view of its external economic policy and from that of what it is essential for Europe itself to do to achieve a balance in its external economic relations. In particular, it discusses the position of Germany as a trade partner of the United States and in that connection deals with the dollar drive.

BLACK, D. and NEWING, R. A.: *Committee Decisions with Complementary Valuation* (William Hodge & Co. Ltd., London, 1951). 10/6.
To be reviewed.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: *Scientific Survey of South-Eastern Scotland* (Macmillan & Co. Ltd., London, 1951). 25/-.
This study was prepared by the local executive committee for the meeting of the British Association in Edinburgh in August, 1951. It is well illustrated and is designed to provide members of the association with a knowledge of the history and development of the whole area of South-Eastern Scotland, and, in addition, with all the important factual information available regarding the present state of the area.

BROIDE, J : *La Evolucion de los Precios Pecuarios Argentinos en el Periodo 1830-1850* (Faculty of Economic Science, Institute of Economics, Buenos Aires, 1951).

CARR, E. H.: *The New Society* (Macmillan & Co. Ltd., London, 1951). 7/6.
To be reviewed.

CHAMBER OF COMMERCE: *How Much Can Our Economy Stand?* (Chamber of Commerce of the United States, 1951). 50 cents.
A report showing the impact on the United States economy of taxation and Government expenditure. Various questions are raised with regard to the burden of taxation and its effect on investment and on willingness to work.

COMMITTEE ON ECONOMIC POLICY: *The Price of Price Controls* (Chamber of Commerce of the United States, 1951). 50 cents.
An examination of the case for price control and the case against it, primarily from the point of view of its effects on the United States economy rather than a theoretical examination.

CLEGG, H. *Industrial Democracy and Nationalization* (Basil Blackwell, Oxford, 1951). 9/6.
To be reviewed.

COLE, G. D. H. and FILSON, A. W.: *British Working Class Movements* (Macmillan & Co. Ltd., London, 1951). 45/-.
To be reviewed.

COMMONWEALTH ECONOMIC COMMITTEE: *Industrial Fibres* (Commonwealth Economic Committee, London, 1952). 5/-.
A factual study of industrial fibres which appears annually. It supports a full discussion of the production, trade and consumption of industrial fibres by a very full statistical cover illustrating the present position and recent changes in respect to these fibres.

CONDOIDE, M. V.: *The Soviet Financial System* (Bureau of Business Research, the Ohio State University, 1951). $4.00.
To be reviewed.

DOBROVOLSKY, S. P.: *Corporate Income Retention, 1915-43* (National Bureau of Economic Research, 1951). $2.50.
This is a study of the financing of business organizations, discussing the relation of net income to dividends and amounts retained and ploughed back into the capital structure of the organization. It shows how the pattern of financing, in particular as between internal and external sources, has changed over the years and provides valuable comparison of different methods adopted at different stages of the business cycle.

DUE, J. F.: *The General Manufacturers' Sales Tax in Canada* (Canadian Tax Foundation, Toronto, 1951). $2.00.
To be reviewed.

FEIN, E.: *Bilanzbildsequenzen* (A. Francke, Bern, 1951). S. Fr. 18.50.
To be reviewed.

FERNANDO, G. I. O. M.: *Report on a Co-operative Study Tour of Europe, 1950* (Government Publications Bureau, Colombo, 1952). Rs. 1.90.
A report on co-operation in a number of European countries. There is also a sketch of co-operative education in these countries and a scheme is presented for co-operative education in Ceylon itself.

FORD, P. and BOUND, J. A.: *Coastwise Shipping and the Small Ports* (Basil Blackwell, Oxford, 1951). 10/6.
To be reviewed.

GLUCKSTEIN, Y.: *Stalin's Satellites in Europe* (George Allen & Unwin Ltd., London, 1952). 21/-.
To be reviewed.

GOODWIN, G. L. (Edr.): *The University Teaching of International Relations* (Basil Blackwell, Oxford, 1951). 8/6.
This is a report of a meeting convened by the International Studies Conference at Windsor in March, 1950. It deals with the position of international relations as a University Study, and outlines the provision made for its teaching in several countries.

HAMMOND, R. J.: *Food. Vol. I. The Growth of Policy* (H.M. Stationery Office, London, 1951). 25/-.
To be reviewed.

HENDERSON, R. F.: *The New Issue Market* (Bowes & Bowes, Cambridge, 1951). 25/-.
To be reviewed.

INNIS, H. A.: *The Bias of Communication* (The University of Toronto Press, 1951). $4.50.
To be reviewed.

INSTITUT FÜR RAUMFORSCHUNG, BONN: *Die Wanderungen im Bundesgebiet, 1950.* Kurt Horstmann.
Die Bevolkerungsdichte im Bundesgebiet und ihre Entwicklung. Werner Nellner.
A discussion of the population movement in Western Germany in 1950, and of the density of population and its development. The discussion is reinforced with a number of tables and maps.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT: *The Economy of Turkey* (I.B.R.D., 1951). $5.00.
This is a report of a mission which resulted from a series of conferences between representatives of the Turkish Government and the I.B.R.D. The mission made a survey of the Turkish economy as a basis for recommendations by the bank on long-term policies on investment and other measures to raise the agricultural and industrial production of the country and improve the efficiency of its distribution system.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT: *The Economic Development of Guatemala* (I.B.R.D., 1951). $5.00.
This is a report of the I.B.R.D. mission to Guatemala, organized in co-operation with the Government of Guatemala. It contains suggestions for consideration by the Government of this central American State, which are offered as a basis for the preparation by the authorities of the State of a sound and well-balanced development programme. The bank also offers to provide any assistance that may be required for working out a development programme.

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT: *Report on Cuba* (I.B.R.D., 1951). $7.50.
To be reviewed.

INTERNATIONAL LABOUR OFFICE: *Year Book of Labour Statistics, 1949-50* (I.L.O., Geneva, 1951). $5. £1/10/ (paper); $6 £1/16/- (cloth).
To be reviewed.

International Economic Papers, No. 1 (Macmillan & Co. Ltd., London, 1951). 15/-.
To be reviewed.

INTERNATIONAL MONETARY FUND: *Balance of Payments Yearbook, Vol. 3, 1949-1950* (Balance of Payments Division, I.M.F., Washington, 1951).
To be reviewed.

JOHNSTON, J.: *Irish Agriculture in Transition* (Macmillan & Co. Ltd., London, 1951). 15/-.
To be reviewed.

JOUVENEL, B. de: *The Ethics of Redistribution* (Cambridge University Press, 1951). 8/6.
To be reviewed.

KEMENY, G.: *Economic Planning in Hungary, 1947-9* (Royal Institute of International Affairs, London, 1952). 12/6.
To be reviewed.

KIEL UNIVERSITY: *Die Weltwirtschaft ende 1951* (Kiel University, 1951).
A further study carrying on the two previous economic examinations noticed in our issue of December 1951.

K-H SERVICES LTD.: *The Nature of Soviet Propaganda.* 1/6. *Russia and the World.* 1/6. *The Safety of the State.* 1/6. (K-H Services Ltd., London, 1952).
These three pamphlets belong to a series produced by the well-known London organization which publishes the *National News Letter.*

KURIHARA, K. K.: *Monetary Theory and Public Policy* (George Allen & Unwin Ltd., London, 1951). 30/-.
To be reviewed.

LAUERSEN, W.: *Ausmass und Formen vertikaler Verflechtung in der Eisen- und Stahl- industrie der Vereinigten Staaten, Grossbritanniens, Frankreichs, Belgiens und Luxemburgs* (Kiel University, 1951).
An examination of the extent and the form of vertical integration in the iron and steel industry of the United States, Great Britain, France, Belgium and Luxemburg.

LEONARD, L. L.: *International Organization* (McGraw-Hill Book Co., Inc., New York, 1951).
This study deals with international organization first of all from the political standpoint and discusses the various organizations concerned with international relations. It deals with political, economic, and social activities, discusses the U.N. system of economic collaboration and the U.N. technical assistance programme. It also outlines the work of specialized economic agencies, such as the I.B.R.D., I.M.F. and the F.A.O., and various specialized social agencies. It concludes with a section dealing with colonial activities.

MALTHUS, T. R.: *Principles of Political Economy* (Basil Blackwell, Oxford,, 1951). 37/6.
To be reviewed.

MULLER: G.: *Raumforschung und Umsiedlung.* (Institut für Raumforschung, Bonn, 1951). D.M. 1.50.
A lecture on population problems, particularly concerned with refugees and resettlement.

NATIONAL BUREAU OF ECONOMIC RESEARCH: *Studies in Income and Wealth, Vol. 14* (N.B.E.R., 1951). $3.50.
This is the fourteenth volume of studies in this series. Previous volumes have been reviewed in earlier issues of *The Economic Record.* In the present one, a new set of wealth estimates are put forward, culminating in new figures for the real wealth of the U.S. This volume will clearly be as valuable as other earlier ones in this series.

NATIONAL BUREAU OF ECONOMIC RESEARCH: *Conference on Business Cycles* (N.B.E.R., 1951). $6.00.
To be reviewed.

Axel, Nielsen, til Minde (Nationalokonomisk Forening, 1951).

NYBLEN, G.: *The Problem of Summation in Economic Science* (C. W. K. Gleerup, Lund, Sweden, 1951).
To be reviewed.

OTTO, H. J.: *Strukturwandlungen und Nachkriegsprobleme der Wirtschaft Italiens* (Kiel University, 1951). D.M. 7.50.

This is another of the studies of the economy of European countries. It examines the economy of Italy and its post-war problems along similar lines to those adopted in the investigation of the economy of Belgium.

PENROSE, EDITH: *The Economics of the International Patent System* (Johns Hopkins Press, Maryland, 1951). $4.00.

To be reviewed.

PFEIFFER, G.: *Strukturwandlungen und Nachkriegsprobleme der Wirtschaft Belgiens* (Kiel University, 1951). D.M. 8.

This is one of the series of studies of the Kiel Institute which examines the economies of various countries. After a discussion of the structure of the Belgian economy, particularly in relation to population, agriculture, trade and various industries, it proceeds to a careful analysis of the post-war problems of the Belgian economy.

ROBINSON, JOAN: *Collected Economic Papers* (Basil Blackwell, Oxford, 1951). 21/-.

To be reviewed.

SEN, S. N.: *Central Banking in Undeveloped Money Markets* (Bookland Ltd., Calcutta, 1951). Rs. 10, 18/-.

To be reviewed.

SMITH, K.: *The Malthusian Controversy* (Routledge & Kegan Paul Ltd., London, 1951). 30/-.

To be reviewed.

SPENCE, C. F.: *The Portuguese Colony of Mocambique* (A. A. Balkema, Capetown, 1951).

This informative publication deals with the Portuguese colony of Mocambique, in East Africa, from the historical, governmental, economic and other aspects. There is a discussion of the various industries carried on in the colony, which is relatively sparsely settled by whites, except in one or two cities, and concludes with a discussion of possible future developments.

SRAFFA, P. (Edr.): *The Works and Correspondence of David Ricardo, Vols. III and IV* (Cambridge University Press, 1951). 24/- each.

Reviewed in this issue.

STRAWHORN, J. and BOYD, W.: *Ayrshire* (Oliver & Boyd, London, 1951). 20/-.

This is the first volume of the third statistical account of Scotland, and is a thorough examination of the way of life of the people of this Scottish county. It deals with the physical basis and history of the county before going on to discuss the various aspects of economic and community life and public administration, concluding with a more detailed dicussion of the way of life in the forty-four parishes and the numerous towns and villages within the parishes.

STUVEL, G.: *The Exchange Stability Problem* (Basil Blackwell, Oxford, 1951). 21/-.

To be reviewed.

TINBERGEN, J.: *Econometrics* (George Allen & Unwin, London, 1951). 36/-.

To be reviewed.

TIWARI, S. G.: *The Economic Prosperity of the United Provinces* (Asia Publishing House, Bombay, 1951). Rs. 16.

To be reviewed.

TURVEY, R. (Edr.): *Wages Policy Under Full Employment* (William Hodge & Co. Ltd., London, 1952). 6/-.

To be reviewed.

UNITED STATES DEPARTMENT OF AGRICULTURE: *Agricultural Statistics, 1950* (United States Government Printing Office, Washington, 1950).

This annual volume of nearly 800 pages provides statistics covering every type of agricultural production from every possible aspect.

UNITED NATIONS: *National Income and its Distribution in Underdeveloped Countries* (United Nations, New York, 1951). 40 cents. 3/- sterling.

To be reviewed.

UNITED NATIONS: *Formulation and Economic Appraisal of Development Projects. Vols. I and II* (United Nations, New York, 1951). Vol. I, 22/6; Vol. II, 17/6.

To be reviewed.

UNITED NATIONS: *Report of the United Nations Mission of Technical Assistance to Bolivia* (United Nations, New York, 1951). $1.50. 11/-.

This mission went to Bolivia in response to a request of the Bolivian Government to aid in the drawing up of a programme of social and economic development. The report was prepared in collaboration with the Bolivian Government, and after a general review of the economy of the country, discusses a number of specific problems and makes a number of proposals for improvement. It also proposes an agreement between the Bolivian Government and the U.N. (subsequently signed on 1st October, 1951), which committed the Government to take certain action and the U.N. to provide assistance for carrying out the programme proposed.

UNITED NATIONS: *Economic Survey of Asia and the Far East, 1950* (United Nations, New York, 1951). $3.75. 27/6 sterling.

To be reviewed.

UNITED NATIONS: *Yearbook of International Trade Statistics, 1950* (United Nations, New York, 1951). $1.75. 12/6.

This U.N. publication is a continuation of the international trade statistics published by the League of Nations from 1933 to 1939. It covers 42 countries and analyses the figures for their trade in various ways. It also provides information on the methods of compliation of the figures by the countries concerned. This will be of great value to anyone undertaking research in regard to such trade.

UNITED NATIONS: *Directory of Building Research and Development Organizations in Europe* (United Nations, New York, 1951). 75 cents.

This production of the United Nations begins with a short statement on the evoluation of building research in Europe and then goes on to deal with the organizations concerned with building research in the various countries and also the international organizations.

WEERAWARDANA, I. D. S.: *Government and Politics in Ceylon* (Ceylon Economic Research Association, Colombo, 1951).

This is primarily a political text and is largely based on the author's thesis for the Ph.D. Degree in the University of London. It discusses the constitution of the Dominion of Ceylon from a number of different aspects and provides a very useful introduction to the Government of this Dominion.

ZALEZNIK, A.: *Foreman Training in a Growing Enterprise* (Harvard Business School, Massachusettes, 1951). $3.50.

This study of the Harvard Business School examines the training necessary for an intermediate position, such as that of foreman, in a growing organization. It discusses the relations of such a person to those above and those below him, and asks what type of training is required to ensure his functioning in the most effective manner.

ZWEIG, F.: *Productivity and Trade Unions* (Basil Blackwell, Oxford, 1951). 21/-.

To be reviewed.

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